AMERICAN

JANUARY • 1954

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

THEATRE
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AMATEUR

In This Issue . . .

- Pictorial Continuity
- Filming A Water Ski Ballet
- Simple Sound Recorder For Amateurs

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35

"To attain brutal realism in the story of 'Martin Luther,' we chose a film known for exceptional contrast, speed and wide latitude,"

declared cameraman Joseph Brun, ASC.

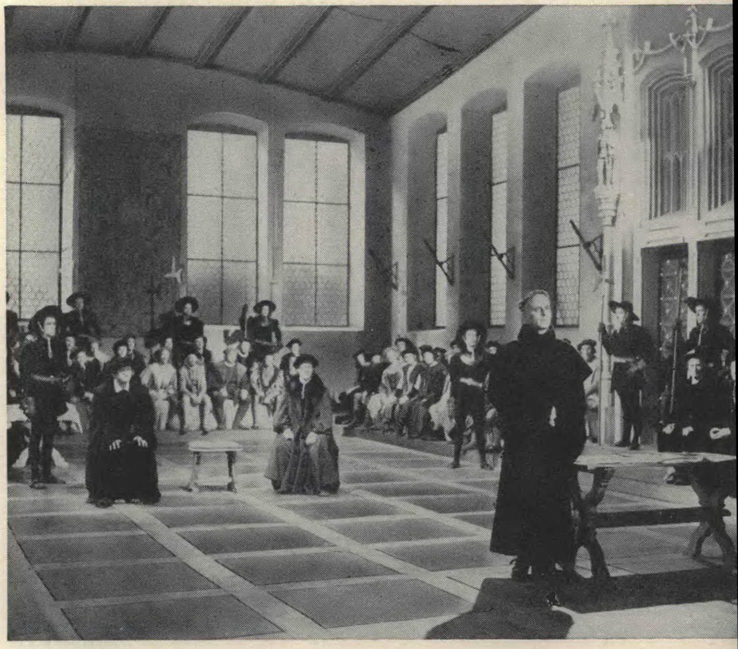
Joseph Brun, left, confers with assistant on location during filming of the story. Note the Eclair Came "300" reflex studio camera used by Mr. Brun.

Inspired career of Martin Luther filmed on DU PONT "SUPERIOR" 2

In discussing the film story of "Martin Luther," proudly produced and released by Louis de Rochemont Associates for Lutheran Church Productions, Inc., cameraman Joseph Brun enthusiastically praised the qualities of Du Pont Motion Picture Film: "We required a film which would enable us to create an artistic portrayal of the man and the issues involved in this theological picturization.

"Because the story was filmed in locales where the original action took place, in Germany during the 16th century, many of our sets were huge naves, unending corridors, and immense halls. Some of the action took place at night and with snow on the ground. It proved a challenge in lighting . . . and, quite understandably, necessitated a film that would capture every detail."

That Du Pont "Superior" 2 was the film selected to photograph this outstanding production further testifies to its wide acceptance by many of the country's foremost cinematographers. That the picture won immediate acclaim as a photographic achievement, and is being extensively shown, although not originally produced for general distribution, is proof anew of the fine work an artist can achieve with the best of tools.



Niall MacGinnis, at table, played the role of Martin Luther in this masterful Louis de Rochemont production now enthralling audiences everywhere.

Typical scene from the authentic story produced by Lothar Wolff. All backgrounds and settings were those actually used in the 16th century, when the action originally occurred.

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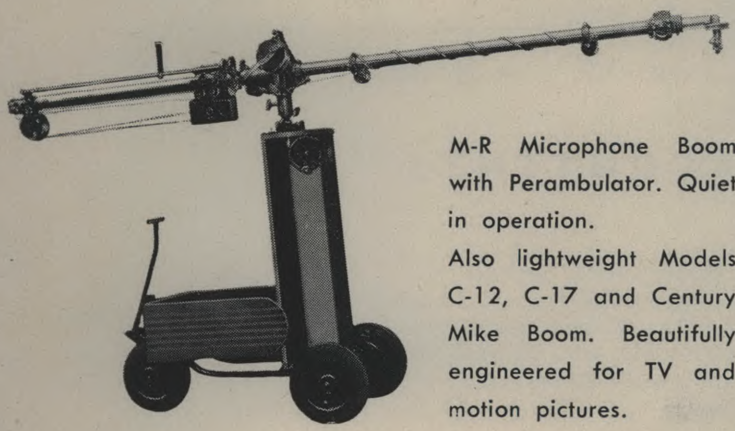

M-R Microphone Boom with Perambulator. Quiet in operation. Also lightweight Models C-12, C-17 and Century Mike Boom. Beautifully engineered for TV and motion pictures.

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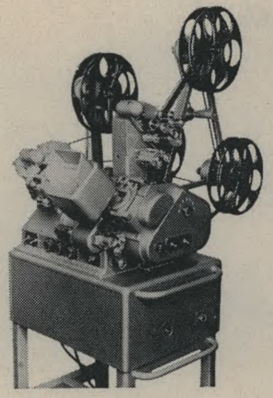

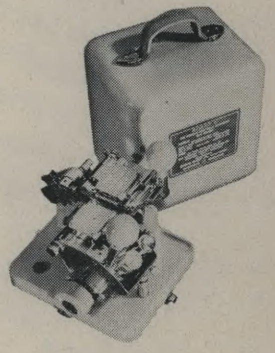

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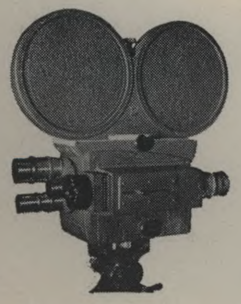
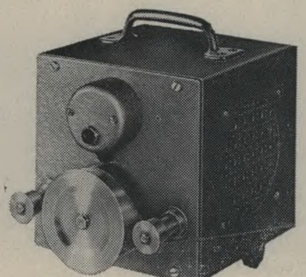


Illustrated: Cinevoice with 3-lens turret, Zoom Finder and 400 ft. Magazine.



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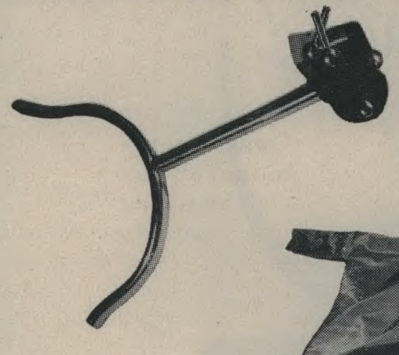

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◆

ON THE COVER

ESTHER WILLIAMS is the focus of attention on the Cypress Gardens, Florida, location of MGM's "Easy To Love," as director of photography Ray June, ASC, checks his light readings. Tony Martin and members of the MGM crew watch. The Technicolor musical features an unusual water ski ballet, the photography of which is described in an article beginning on page 18 of this issue.

—Photo by Eric Carpenter.

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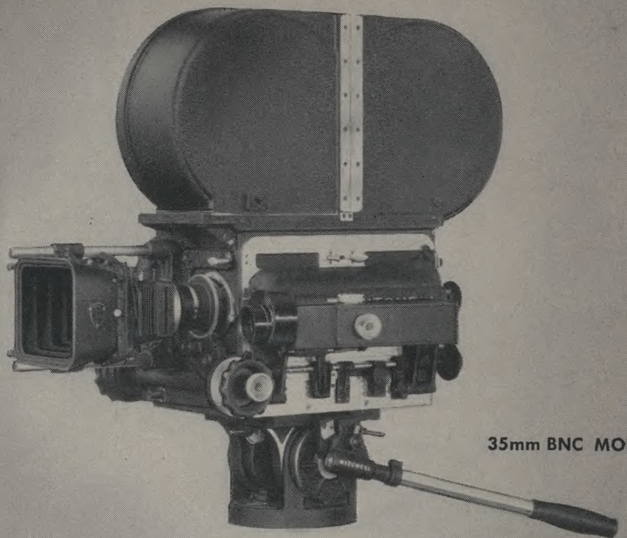
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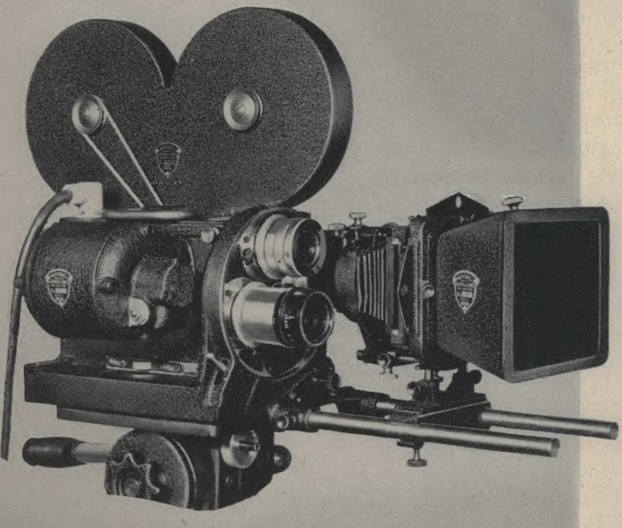
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INDUSTRY NEWS

Irving Browning, president of The Camera Mart, Inc., New York City, and founder of the Society of Cinema Collectors and Historians has recently presented two film subjects to the Museum of Modern Art for its film library. One is a two-reel short he produced in 1930 titled "City of Contrasts"; the second is a film report of the work of famed photographer Edward Steichen titled "Master of The Camera."

•

The coming year is likely to see renewed interest on part of studios in production of short subjects. "Too many exhibitors have been ignoring the big money-making potential in the promotion of one-and-two-reelers," according to Paramount's Oscar A. Morgan. With the growing trend toward single-bills, there will be increasing need for short subjects, cartoons, etc., to round out programs.

•

Newsreels are going wide-screen, and it is predicted that there will also be a general swing by all news films to color, now that there is more ample supply of Eastman color single-negative, necessary to newsreel color operations.

As for the trend of newsreels to wide screen, here are latest steps: Paramount began turning out newsreels on January 2nd in the standard Paramount wide-screen aspect ratio of 1.66 to 1. Footage is shot in standard manner, but with transparent masks in camera finders showing the 1.66 to 1 ratio.

MGM's "News of the Day" has begun issuing a wide-screen version, using the aspect ratio of 1.85 to 1.

Warner's Pathe News is using a ratio of 1.66 to 1—same as Paramount.

•

Fred Quimby, MGM's short subjects production head, has installed CinemaScope lenses on cameras of studio's cartoon department, and will henceforth turn out CinemaScope versions of a number of its pen-and-ink-and-color subjects. First three will be "Touche Pussy Cat," "South Bound Duckling" and "Brave Little Mouseketeer," all Tom and Jerry subjects.

Quimby also has started production on two new Tom and Jerry cartoons, "Robin Hoodwink," and "Ivan Whoa Whoa," using wide-screen technique. "A much broader range of story action is possible when a cartoon is drawn to wide screen proportion throughout," he said.

Warner Brothers has set January 4th as the date for resumption of production of animated cartoons. The studio plans to turn out between 25 and 30 cartoons during 1954.

A new all-purpose cartoon camera and crane has been installed. Larger swivel units for the animation, inking and painting desks have also been added, all of which will enable the studio to produce its new series of cartoons for both standard screens and the new WB screen ratio of 1.75 to 1.

•

Short Subjects in CinemaScope, a necessary adjunct to rounding out a theatre program where the feature is in CinemaScope, is now a major project on the 20th Century-Fox lot. Charles G. Clarke, ASC, photographed "Vesuvius Express," the studio's first. It's a travelogue-type subject filmed for the most part aboard one of the world's most famous railroad trains as it runs between Milan and Naples, Italy. Other CinemaScope shorts are now in production.

•

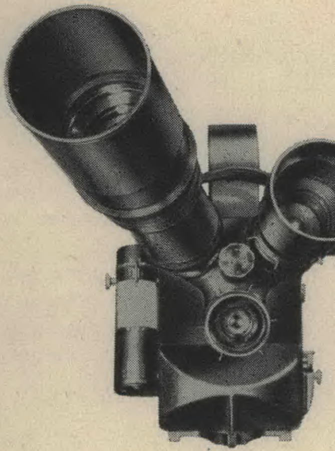
Three Appointments in Eastman Kodak Company's film processing organization has been announced. They are Earl R. Ruckdeschel, manager of company's new processing station to open at Chamblee, Georgia in June; Donald R. Brown, who becomes assistant service manager of the processing division in Rochester; and Harry G. Cooke, named general supervisor of engineering for the color print and processing organization in Rochester.

•

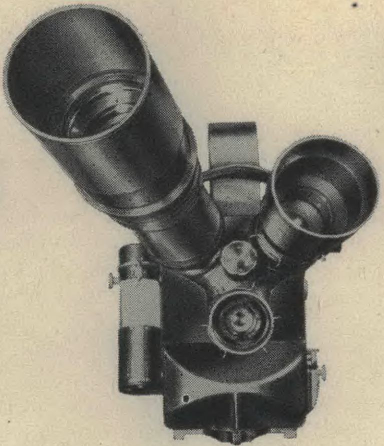
Advent of new dimensions in film production has brought still another advantage to the studios—that of cashing in on many of their best "old" story properties by re-making them in CinemaScope and other wide-screen systems. Paramount, for example is readying a new, revised script on "The Covered Wagon," one of the industry's all-time great pictures. Other major studios are similarly active.

•

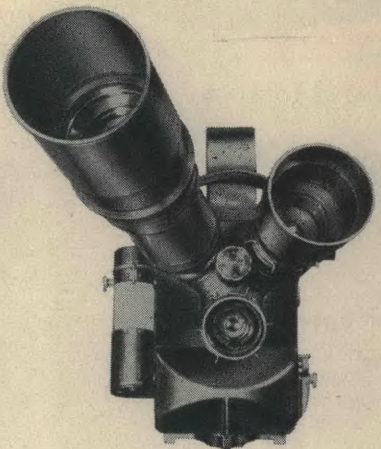
"Wonder if it were just bad habits that rolled up movie budgets so high? Many TV film producers are using the same crews, equipment, and methods and are turning out footage in one-tenth the time and consequently one-tenth the money." Leo Guild, in his column "On The Air" in a recent issue of the "Hollywood Reporter."



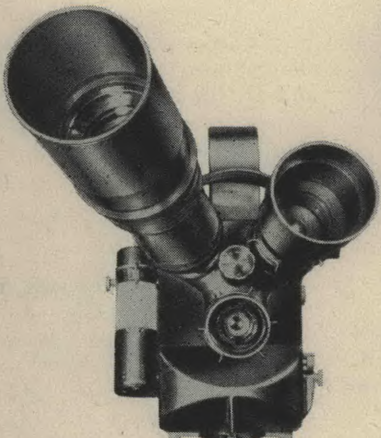
35 and 16/35 mm



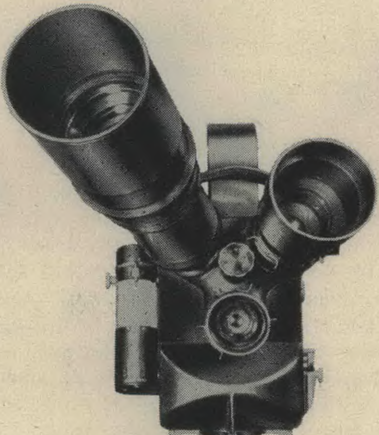
reflex viewing



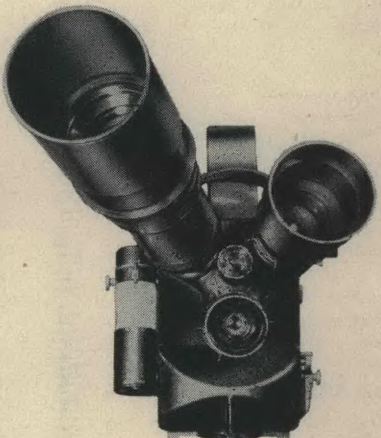
divergent turret



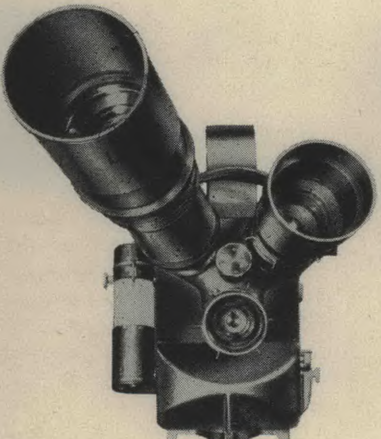
40° to 200° adjustable shutter



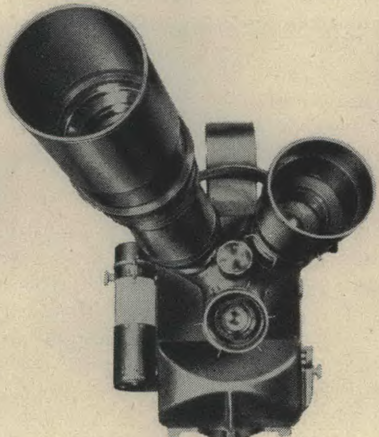
lightweight—14 lbs.



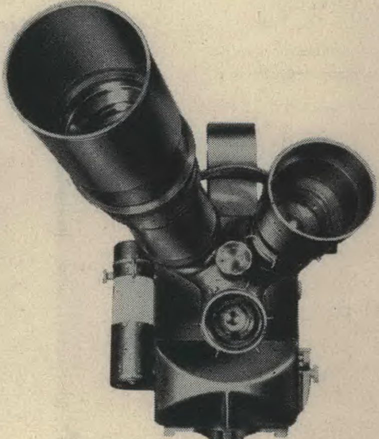
100′ to 400′ magazine



instantaneous loading



dovetail mounting



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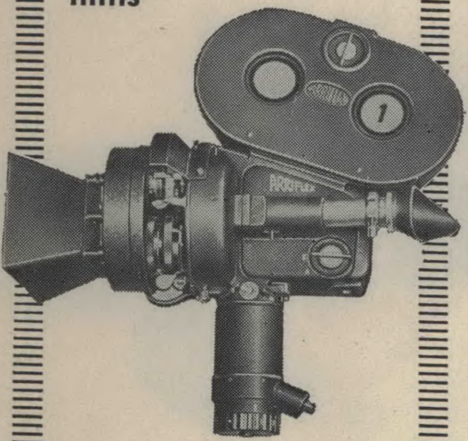

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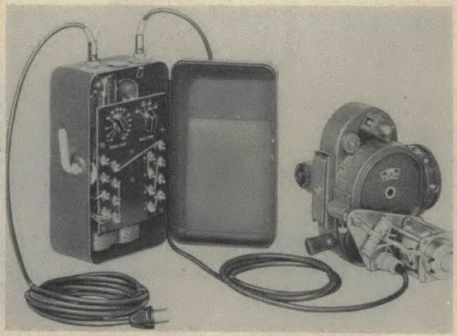
Time Lapse Device — Photovision Company, 1636 Washington Ave., Wilmette, Ill., announces a time lapse device for use with Bell & Howell 16mm Filmo and 35mm Eyemo cameras. The unit provides automatic picture cycling in a wide range of timing from two frames per second to one every four minutes.

Device consists of two units: the solenoid and timer. The former is a self-contained drive unit which drives the camera in place of the spring motor or auxiliary motor drive. Thus it is possible to maintain more even exposures from frame to frame, than when the camera spring motor is used.



The timer, an electronic intervalometer, has two dial controls, permitting unlimited selection of cycling intervals. This unit plugs into any standard 110-v, 60 cycle AC current supply.

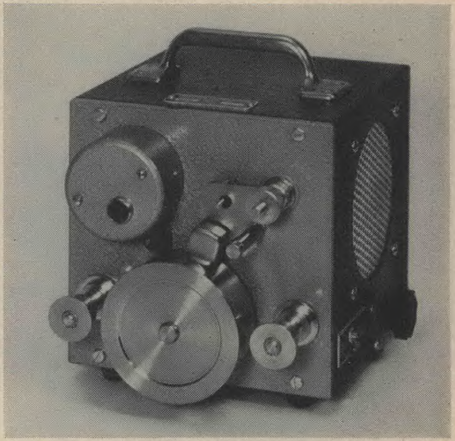
Price of Solenoid unit is $175; the Intervalometer, $185.00. Delivery 60 days from order. Further information is available by writing the manufacturer.

Carrying Case — Crownlite, Inc., Brooklyn, N. Y., manufacturers of barlite units for cine cameras, announces a new carry carton for its Foldmaster and Foldmaster Deluxe units. It is an attractive cardboard case having a plastic handle. Price of the Foldmaster with carry case is $12.95; the Foldmaster Deluxe with case is $19.95.

Optical and Filter Glass—Alfa Photo Corp., 303 West 42nd St., N. Y. City, has been appointed American agents for the line of optical and filter glass manufactured by Chance Brothers Ltd., Birmingham, England. Company is one of the oldest manufacturers of these materials.

The New York office will function as liaison to the American users of optical glass, answer inquiries, and expedite orders. Catalogs and price information are available on request.

Optical-Magnetic Reader—Precision Laboratories, 1139 Utica Ave., Brooklyn 3, N. Y., announces a new combination optical-magnetic sound track reader. Equipped with combination 16mm/35mm film rollers, these are machined to SMPTE standards and equipped with oilless bearings. The stabilizer drum has needle bearings and a highly polished surface to prevent scratching of film.



Changing from optical to magnetic is simply a matter of flicking a switch. The magnetic head mount has adjustment for track location and magnetic film thickness. Head is disengaged from contacting the optical film by mechanical means. Price is $259.50, FOB factory.

Color Projection Guide — Radiant Manufacturing Corp., 2627 West Roosevelt Rd., Chicago 8, Ill., offers a free 16-page booklet on the preparation and projection of color pictures entitled "Secerts of Good Color Projection." Among the wealth of information it contains are data on complimentary colors with ex-

(Continued on Page 14)

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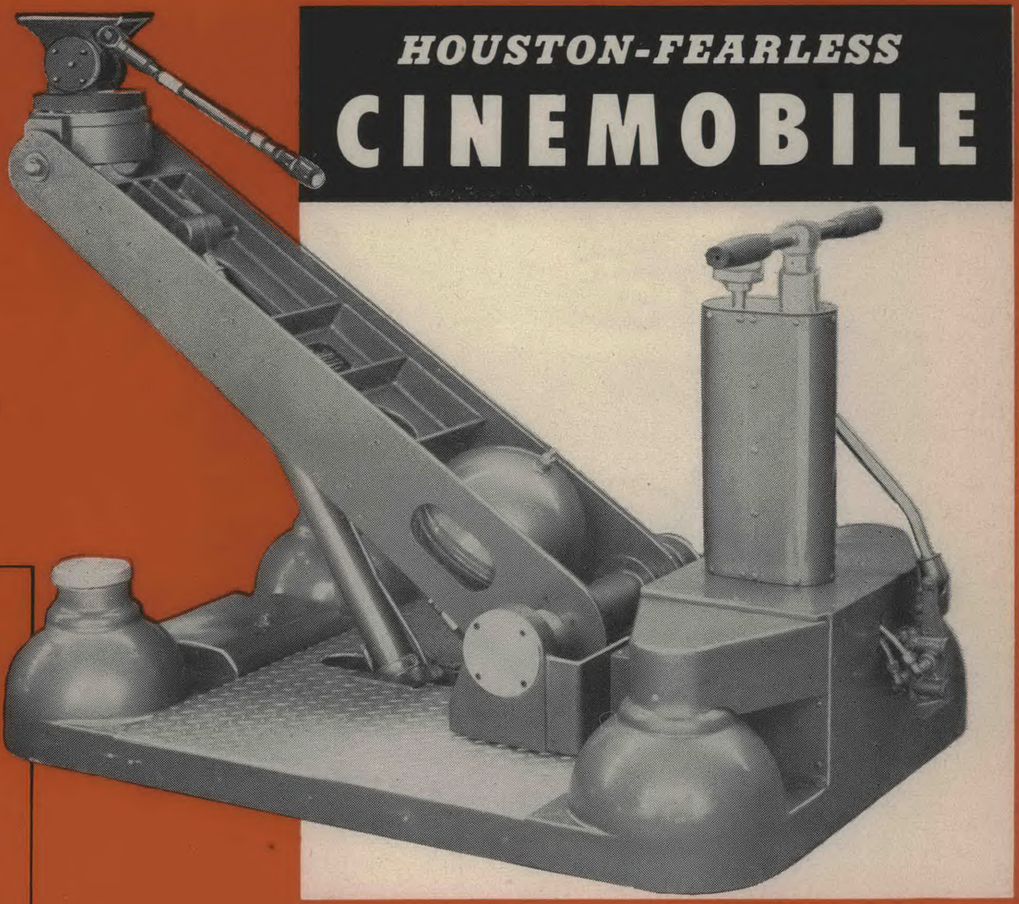

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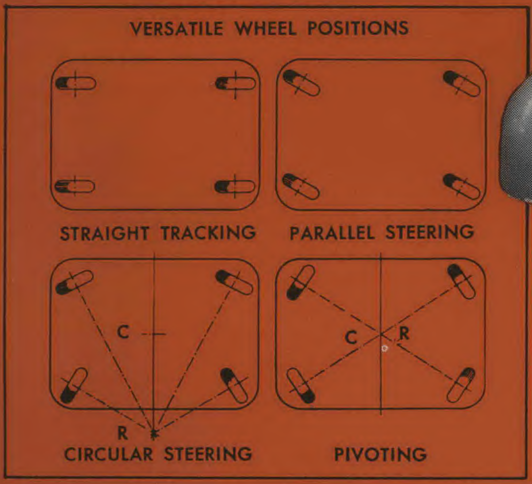

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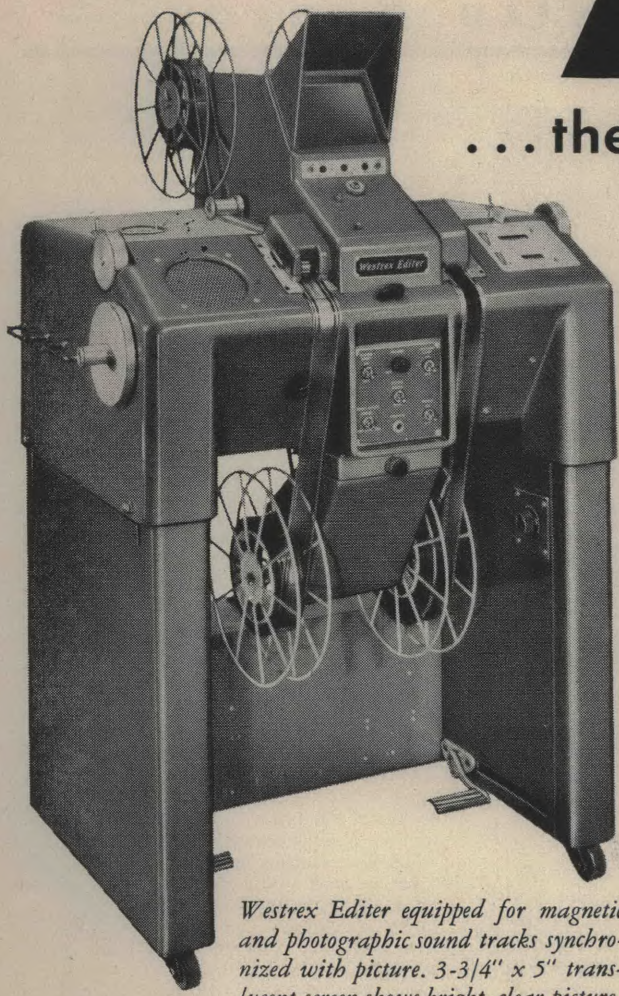

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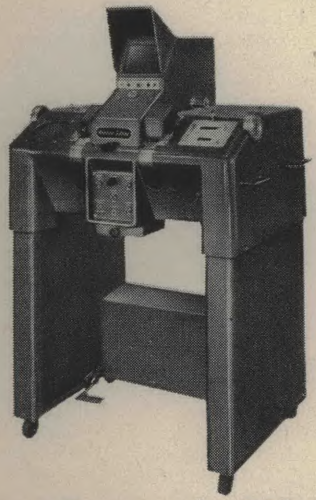
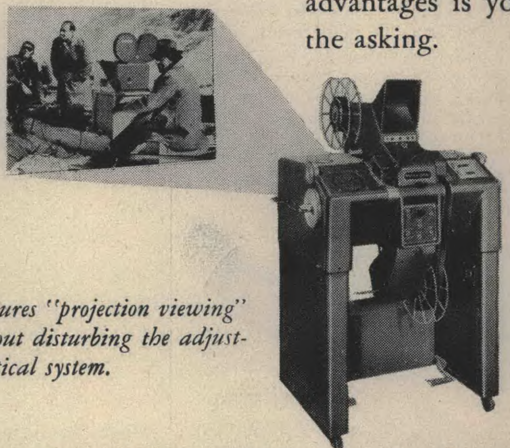
The Westrex Editer is quiet in operation—no intermittent, hence less noise and less film damage—speedy and efficient. Among its advanced features are simplified threading—automatic fast stop—synchronization while running—improved sound—lower flutter.

The Westrex Editer—available in both 35mm and 16mm models—is the latest in a long line of notable Westrex contributions to the motion picture industry. A new illustrated folder that describes in detail its many technical and operating advantages is yours for the asking.



The basic Westrex Editer, for use with film strips—vertical film handling method—faster and more practical for either film strips or reels of film.



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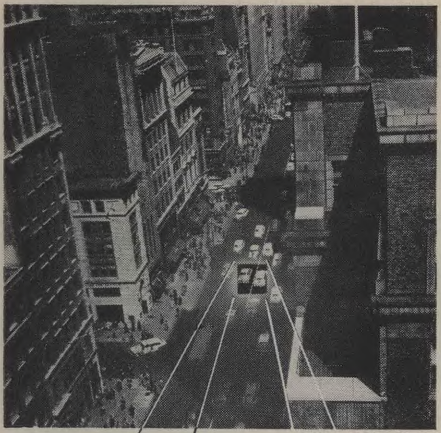

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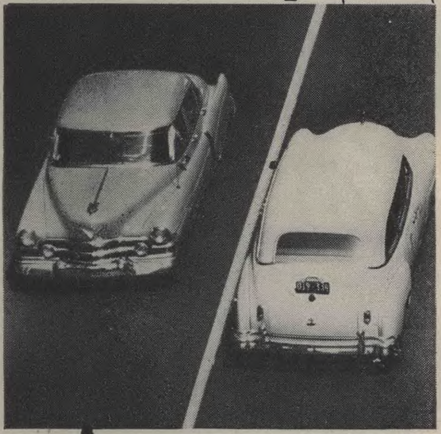

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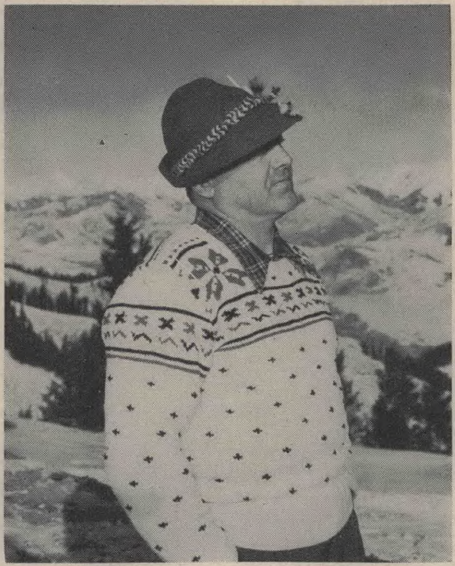


IRMIN ROBERTS, ASC, and Peruvian topper.

Irmin Roberts, ASC, special photographic effects specialist at Paramount Studios, picked up a typical peasant rain hat in Peru, while photographing "The Story of The Incas." With a little blocking and the addition of a llama cord, the headgear was high style enough to start a fad that spread to other Paramount executives and to Lima, Peru where a store started turning them out by the gross.

Photo of Roberts above was taken by Sun Valley news bureau photographer Reid Rowland, while Mr. and Mrs. Roberts were guests at the resort over the holidays.

●

Karl Struss, ASC, in Italy for the past year, has photographed three 3-D films in Ferrania Color, which he says is similar to Eastman Color negative. It was just 29 years ago that Karl photographed the first movie of "Ben Hur" in Italy. MGM is currently preparing to re-make the picture.

●

Jack Greenhalgh, ASC, resumes shooting television films for Family Films the first week in February.

●

Mack Stengler, ASC, has been signed by Guild Films, Inc., to photograph both the "Liberace Show," and "Life With Elizabeth" during 1954.

●

David P. Boyle, ASC, son of John Boyle, secretary of the American Society of Cinematographers, died January 6th following a brief illness. At the time of his death, he was electrical engineer for Pathe Industries' Hollywood laboratories. Surviving besides his parents, are his wife and two daughters.

First International Film Festival of Brazil will take place in Sao Paulo from the 12th to the 26th of February. Film producers in all countries have been invited to participate, and a number of important personages from the Hollywood studios have been invited as special guests. The event will comemorate the fourth Centennial of the city of Sao Paulo.

●

Benjamin Berg, ASC, accompanied by Mrs. Berg, are enroute to Paris, France, on a combined vacation and business trip. Berg is U. S. representative for Eclair-Paris, manufacturers of the Eclair Camerette, with offices in Hollywood.

●

Ray Fernstrom, ASC, who recently severed connections with Reid Ray Film Productions in Minneapolis, has been signed as director of photography by Valiant Productions, makers of TV and industrial films in Houston, Texas.

●

A Total of 425 Films—10 less than last year, have been approved by the Academy of Motion Picture Arts and Sciences as contenders for the 1953 Academy Awards. This is the lowest number of films making the "eligible" list in four years.

Of these, 28 black-and-white and 24 color productions are currently being voted upon by industry cinematographers to select the 10 films in each group that will be nominated for Cinematography Awards.

In the meantime there is marked interest by the industry in pre-Award polls which have been conducted throughout the U. S., naming the "best" or "10 best" pictures of the year. etc.

In San Francisco, critics named "Moulin Rouge" (a contender for 1952 Oscars last year) as best for 1953, with "From Here To Eternity" next best.

MGM's New York publicity head, Russ Stewart sees the studio's "Julius Caesar," "Knights Of The Round Table," and "Lili" as leading the nominations for best picture and for technical Awards.

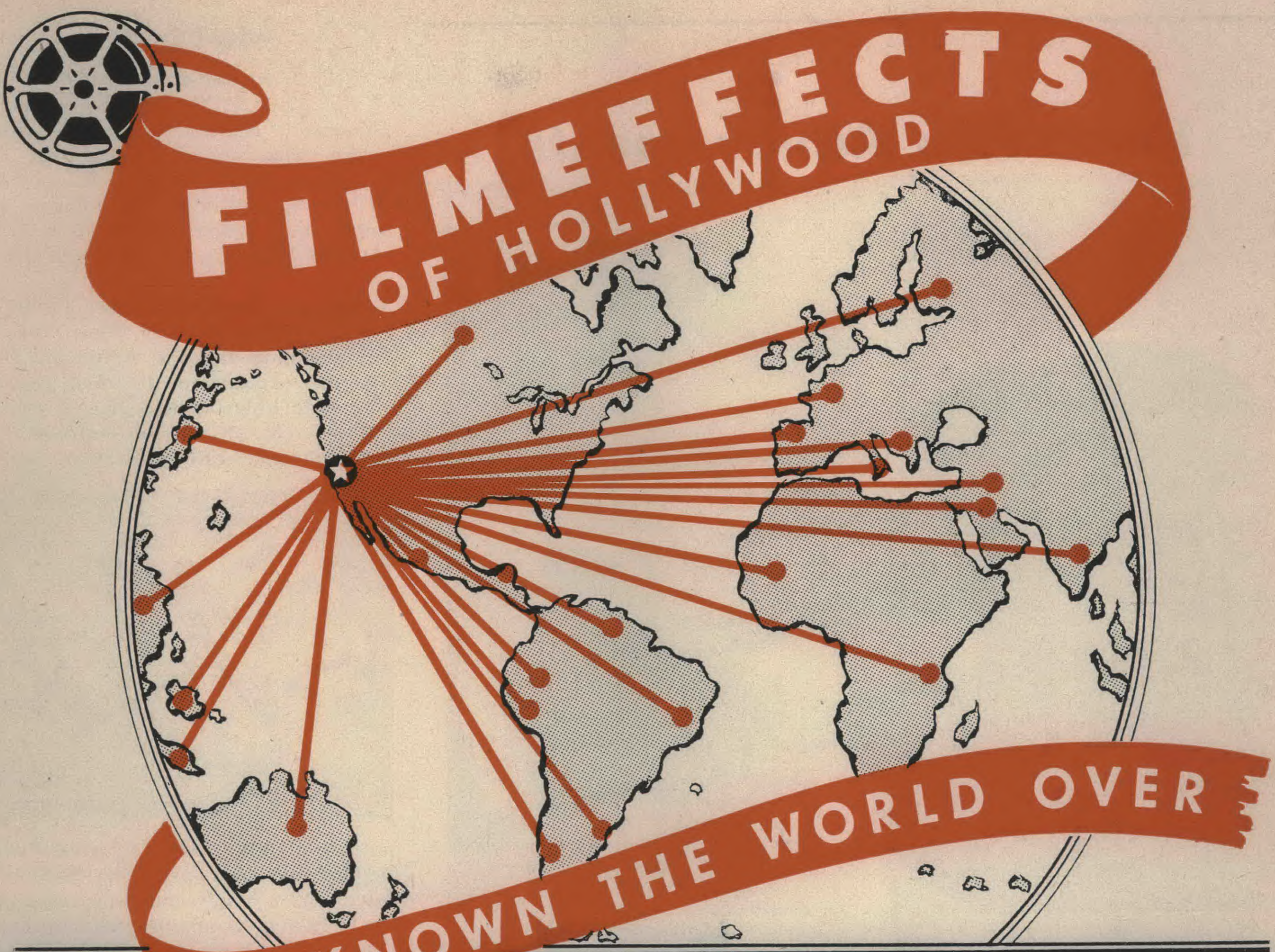
The New York Film Critics gave the nod to "From Here To Eternity" and "Roman Holiday" as top pictures of the year at the 19th annual voting at the Newspaper Guild club December 28th.

●

Metro-Goldwyn-Mayer studios will celebrate 1954 as the 30th Jubilee of the merger of the old silent-era Metro, Goldwyn and Mayer studios. An interesting note is the fact that old Metro employees, such as John Arnold, ASC, and Irving Ries, ASC, who went along with others in the move from Hollywood to Culver City, are still with MGM. Arnold is executive director of photography, and Ries is head of the optical effects department.

●

Hollywood Foreign Correspondents Assn., at a banquet January 22 at the Del Mar Hotel, Del Mar, Calif., will present its annual Golden Globe Awards, including that for best cinematography.



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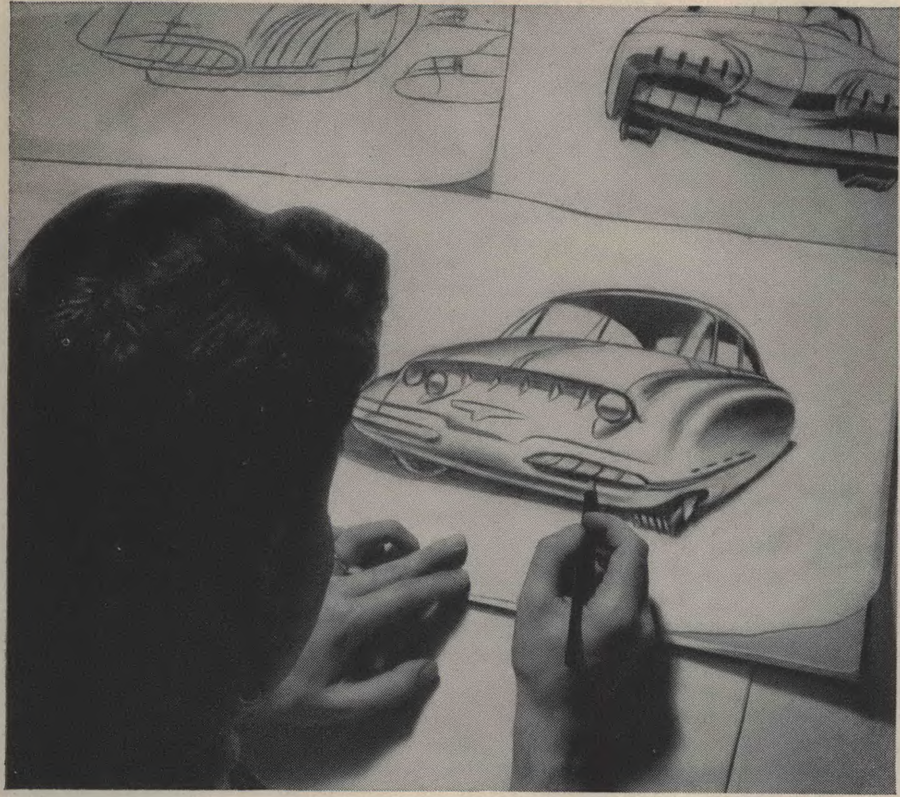

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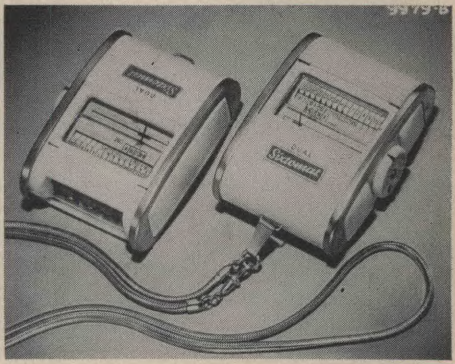
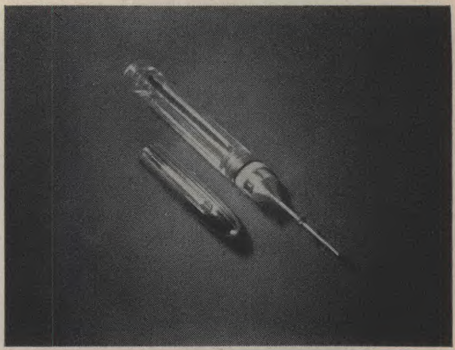
WHAT'S NEW

(Continued From Page 8)

planatory charts, projection room screen sizes, audience capacities, and projection length distances. Also included are helpful hints on regular and stereo color projection. Copies may be obtained by writing the company direct.

Automatic Dual Sixtomat—Photoptic Corp., 235 Fourth Ave., New York, N. Y., announces the new Automatic Dual Sixtomat exposure meter which features automatic hi-low light intensity switch, built-in roll diffuser for incident light measurement, scale magnifiier, and a number of other features for easy reading and one-hand operation. Photocell is fitted with a honeycomb lens and a baffle to match its angular field to standard camera lenses. In renders accurate readings in brightest sunshine as well as dim interiors. Proper shutter speeds and lens openings for still and movie cameras are clearly indicated. Price, including chrome neck chain, is $27.50.





Pen-Size Oil Can—Pell-i-can, a new pen-sized oiler with a long, narrow "beak" now makes it easy to fill small out-of-the-way oil holes in movie cameras and projectors, tape recorders, electric shavers, etc. New oiler features a visible oil supply and handy pocket clip. Spilling of contents is avoided by delivering its fine, light-weight oil one drop at a time. Pell-i-can is leakproof, easy to refill and unbreakable in normal use. It is available for $1.49 postpaid, from the Lofthouse Company, Box 832, Binghamton, N. Y.

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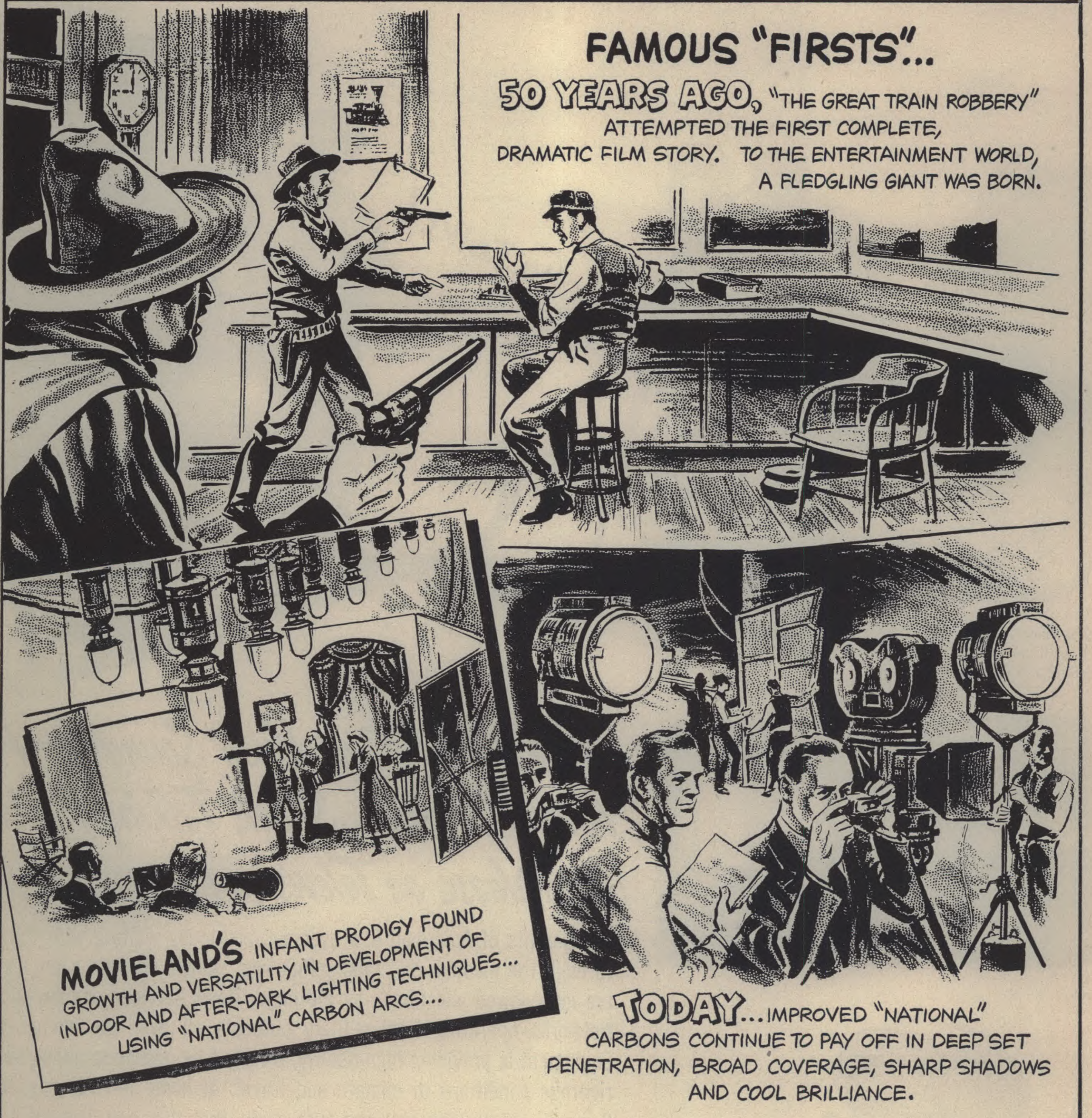

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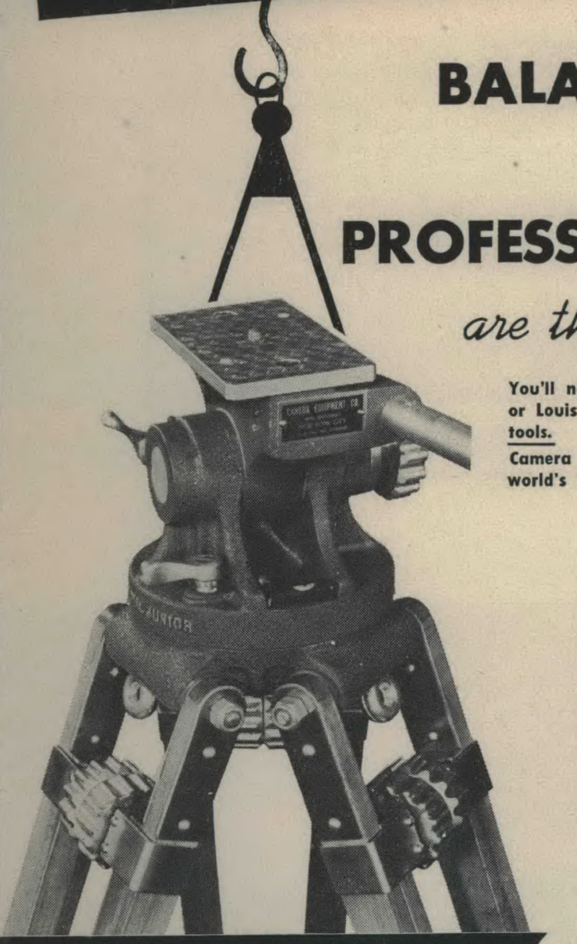

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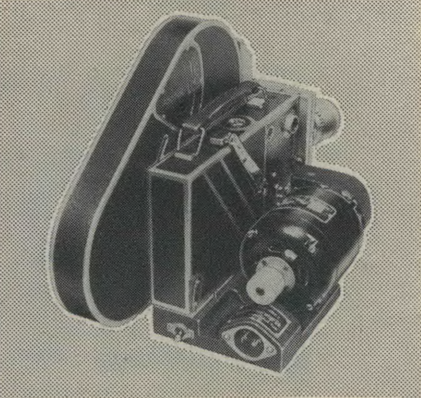

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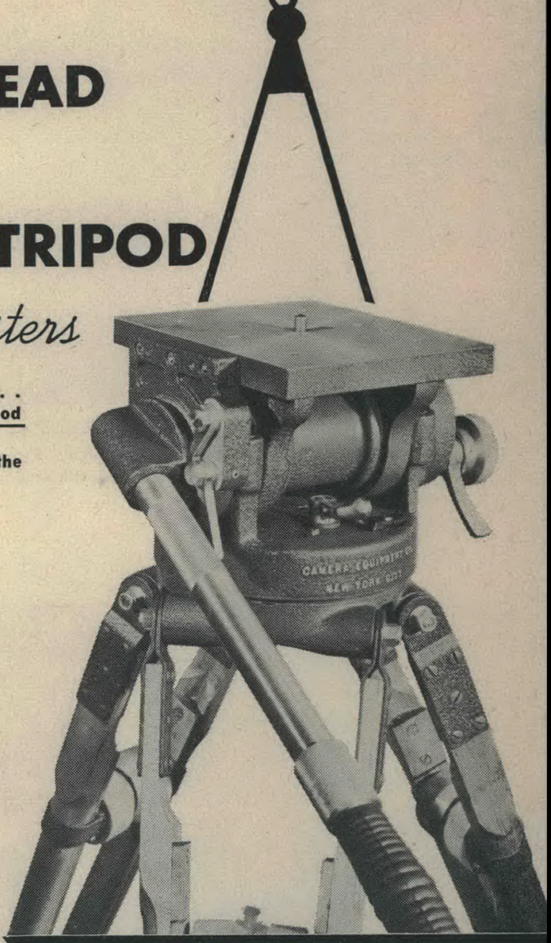

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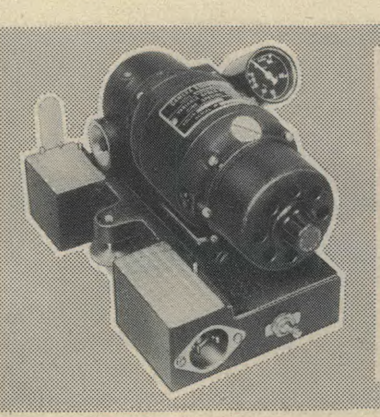

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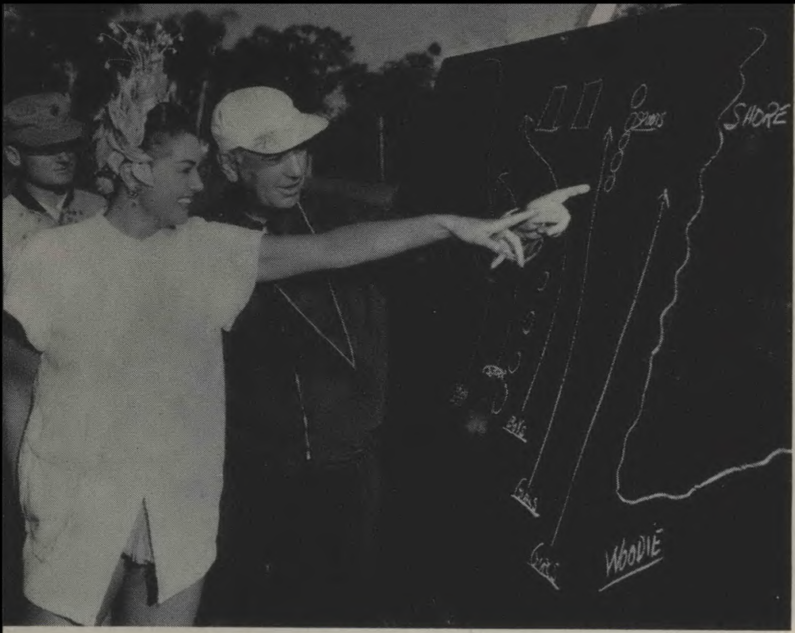


FIG. 1—Water ski routines for MGM's "Easy To Love" were carefully planned in advance. Here director Busby Berkeley (R) briefs Esther Williams on her routine by means of blackboard diagrams.

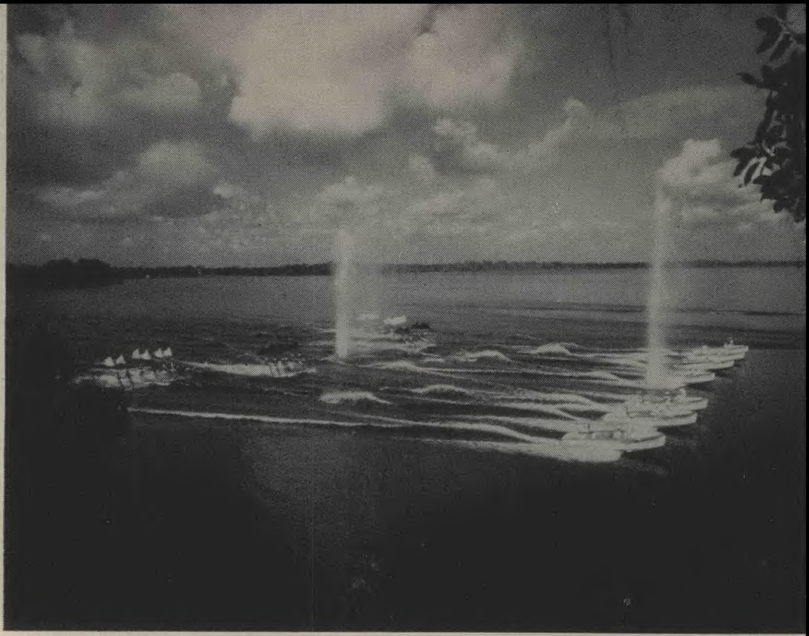


FIG. 2—One of the spectacular water ski numbers photographed by Ray June from helicopter. Countless rehearsals were required to obtain the precision that made number so colorful.

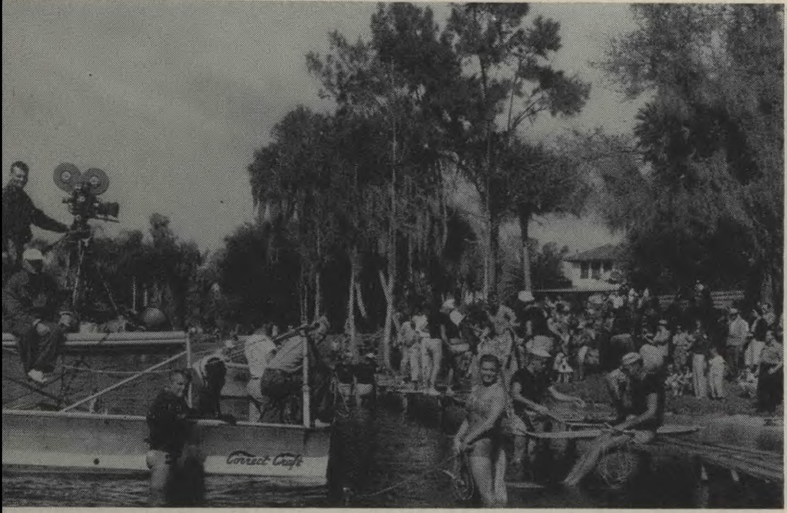


FIG. 3—Esther Williams, standing to right of camera boat, makes ready to don skis for a series of shots at Cypress Gardens.

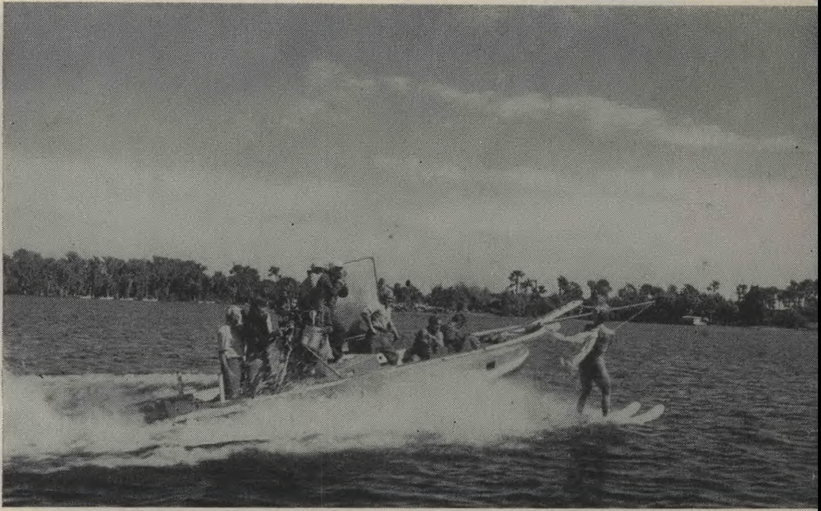


FIG. 4—Miss Williams holding tow rope extended from boom of boat is shot in closeup doing ski routine filmed earlier in long shot.

FIG. 7—Rough going in turbulent water churned up by tow boats and wind which prevailed daily. Here figure dives from 'copter trapeze.

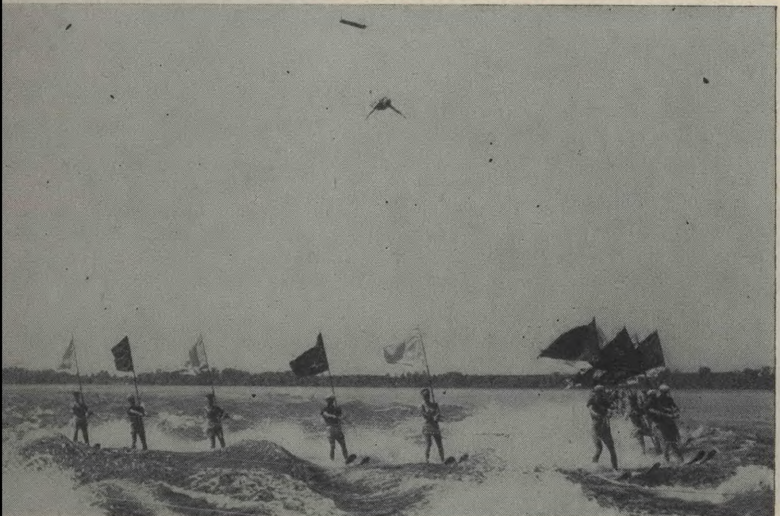
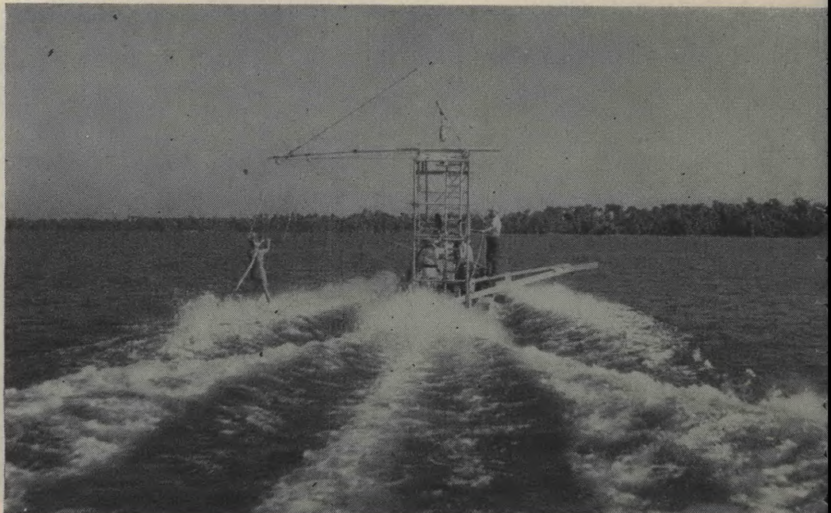


FIG. 8—Unique arrangement for filming Esther Williams taking off from water on trapeze of helicopter.



Filming A Water Ski Ballet

How cinematographer Ray June and his camera crew filmed the spectacular and colorful sequence for MGM's "Easy To Love," from motorboat and helicopter at Cypress Gardens, Florida.

By ARTHUR ROWAN

ONE OF THE MOST fascinating, exciting and certainly the most daring of photographic assignments ever undertaken by a studio cinematographer was the filming early last year at Cypress Gardens, Florida, of the water ballet sequence of the Metro-Goldwyn-Mayer Technicolor production, "Easy To Love," starring Esther Williams and Van Johnson.

The assignment involved for director of photography Ray June, ASC, such unorthodox operations as shooting from a helicopter and from the swaying deck of a 12-foot parallel mounted on a motorboat skimming along at 40 miles per hour.

The ballet, said to be the greatest performance of massed water skiers ever attempted, formed the grand finale of the picture and featured the aqua-skiing prowess of Esther Williams and some

(Continued On Page 42)

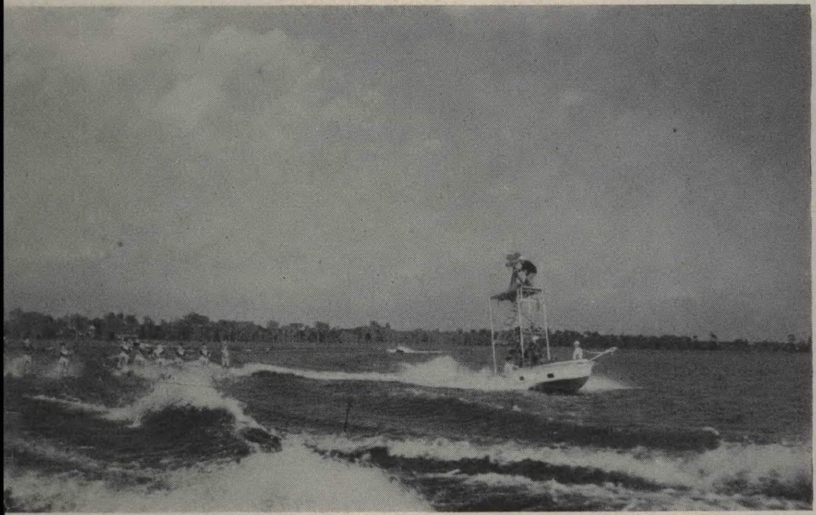


FIG. 5—Ray June atop 12-foot parallel on speeding motorboat shoots formation of water skiers in one of several numbers for production.

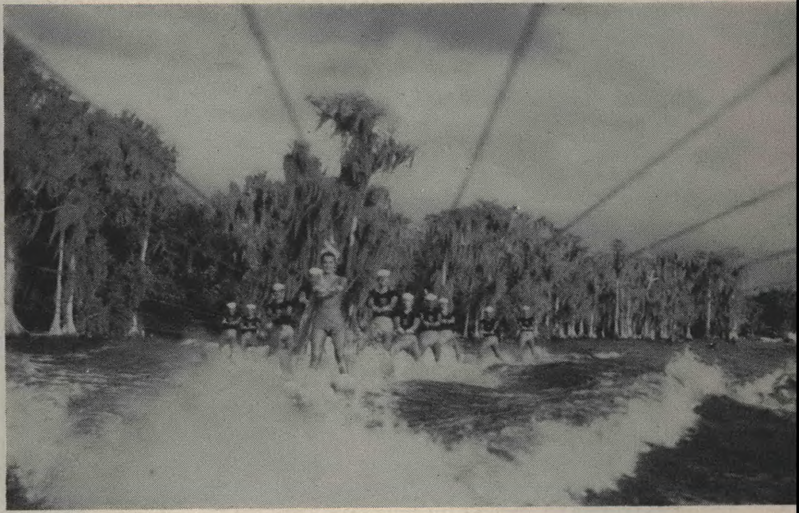


FIG. 6—Scene as filmed by second camera in same boat (Fig. 5). Tow lines lend unusual compositional touch to scene.

FIG. 9—The camera 'copter was employed often in shooting scenes such as this of water ski groups in formation.

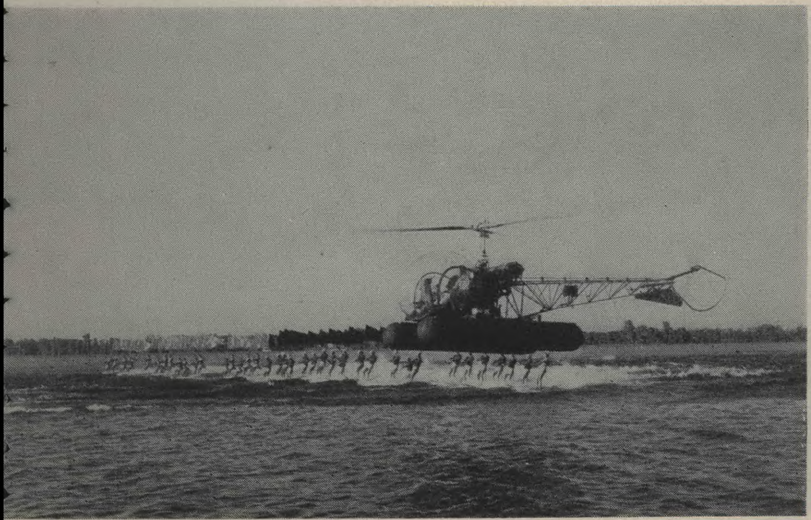
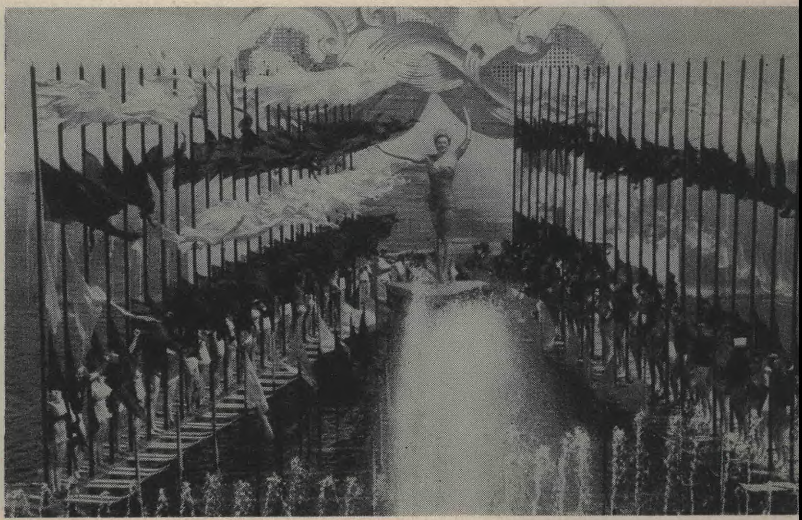


FIG. 10—The grand finale shot, made on MGM's back lot, in which Esther Williams makes spectacular entrance on skis.



1953
BOX SCORE

76 A. S. C. CAMERAMEN **filmed** **236** HOLLYWOOD FEATURE FILMS

White, Guthrie and

OF SOME 250 feature films produced in Hollywood during 1953, 236 were photographed by 76 ASC cameramen. High man in the number of features filmed for the year is Lester White who directed the photography of nine. Right behind him with a total of eight features each are Carl Guthrie and Harry C. Neumann—the latter one of the top men also in 1952 With the exception perhaps of those ASC cameramen who were under contract to photograph the popular series of television films, the three named above were the busiest cinematographers in the Hollywood studios during the past year.

Despite the general industry-wide recession that set in early during 1953, the number of productions

Lloyd Ahern
"Gorilla At Large," Fox.
"Princess Of The Nile," Fox.

John Alton
"The San Quentin Story," Ind.
"Take The High Ground," MGM.
"I, the Jury," Ind.
"Witness To Murder," Ind.
"Desperate Men," Ind.

Arthur Arling
"Red Garters," Para.

Lucien Ballard
"The Desert Rat," Fox.
"Inferno," Fox.
"Prince Valiant," Fox.
"New Faces," Fox.

George Barnes
"Little Boy Lost," Para.

Joseph Biroc
"Harness Bull," Ind.
"Donovan's Brain," Ind.
"The World For Ransom," Ind.
"Rage Of The Jungle," Ind.

Charles Boyle
"The Stand At Apache River," U-I.

John Boyle
"The 3-D Follies," Ind.

William Bradford
"Saginaw Trail," Col.
"Last Of The Pony Express," Col.
"Top Banana," Ind.

Robert Burks
"The Grace Moore Story," W.B.
"The Boy From Oklahoma," W.B.
"Dial M For Murder," W.B.
"Rear Window," Para.

Ellis Carter
"Captain John Smith and Pocahontas," Ind.
"The Royal African Rifles," Allied Artists.
"Arrow In The Dust," Allied Artists.

Charles G. Clarke
"Fight Town," Fox.
"Night People," Fox.

Wilfrid Cline
"Calamity Jane," W.B.
"Rear Guard," W.B.
"Lucky Me," W.B.

Stanley Cortez
"China Gold," Ind.
"The Neanderthal Man," Ind.
"Shark River," Ind.
"Riders To The Stars," Ind.
"Broncho Apache," Ind.

Edward Cronjager
"Twelve-Mile Reef," Fox.
"Gatling Gun," Fox.

Floyd Crosby
"The Man Who Lived Twice," Col.

William Daniels
"Drifting," U-I.
"Brady's Bunch," U-I.
"The Glenn Miller Story," U-I.
"The Far Country," U-I.

Robert DeGrasse
"Marry Me Again," Ind.

Edwin B. Du Par
"The System," W.B.
"The Eddie Cantor Story," W.B.
"The Bounty Hunter," W.B.
"Ring Of Fear," W.B.

Elmer Dyer
"Hollywood Stunt Man," Ind.

Daniel Fapp
"Money From Home," Ind.
"Knock On Wood," Para.
"Living It Up," Para.

George Folsey
"The Band Wagon," MGM.
"All The Brothers Were Valiant," MGM.
"Tennessee Champ," MGM.
"Executive Suite," MGM.
"Panther Squadron," MGM.
"A Bride For Seven Brothers," MGM.

Henry Freulich
"Conquest Of Cochise," Col.
"Charge Of The Lancers," Col.
"The Nebraskan," Col.
"Battle Of Rogue River," Col.
"Saracen Blade," Col.
"The Miami Story," Col.
"Jungle Man-Eaters," Col.

Lee Garmes
"Outlaw Territory," Ind.
"Hannah Lee," Ind.

Maury Gertsman
"The Golden Blade," U-I.
"Back To God's Country," U-I.
"The Glass Webb," U-I.
"Fort Laramie," U-I.
"Tanganyika," U-I.

Irving Glassberg
"Walkin' My Baby Back Home," U-I.
"Border River," U-I.
"Ride Clear Of Diablo," U-I.
"The Black Shield of Falworth," U-I.

Loyal Griggs
"Elephant Walk," Para.
"White Christmas," Para.

Burnett Guffey
"From Here To Eternity," Col.
"The Human Beast," Col.

Carl Guthrie
"All I Desire," U-I.
"Three Sailors And A Girl," U-I.
"Ma And Pa Kettle Hit The Road Home," U-I.
"Bowery Bloodhounds," Allied Artists.
"Tabloid," Allied Artists.
"Yankee Pasha," U-I.
"Johnny Dark," U-I.
"Playgirl," U-I.

Ernest Haller
"Carnival," Ind.

Sidney Hickox
"Blowing Wild," W.B.
"Them," W.B.

Winton Hoch
"A Star Is Born," W.B.

James Wong Howe
"Main Street To Broadway," Ind.
"Jennifer," Ind.

Harry Jackson
"The Kid From Left Field," Fox.
"Rhapsody," MGM.

Ray June
"A Slight Case Of Larceny," MGM.
"Easy To Love," MGM.

Benjamin Kline
"No Escape," Ind.

Milton Krasner
"Vicki," Fox.
"The Story of Demetrius," Fox.
"We Believe In Love," Fox.

Charles Lang
"The Big Heat," Col.
"It Should Happen To You," Col.
"Sabrina Fair," Para.

Joseph La Shelle
"Dangerous Crossing," Fox.
"Be Prepared," Fox.
"River Of No Return," Fox.

Ernest Laszlo
"The Moon Is Blue," Ind.
"The Naked Jungle," Para.
"About Mrs. Leslie," Para.
"Broncho Apache," Ind.

eumann Lead In 1953 Assignments...

and number of cinematographers employed were only slightly less than during the previous year. In 1952, 79 ASC cameramen photographed 290 feature film productions.

Whereas major studios like Metro-Goldwyn-Mayer and Twentieth Century-Fox, disrupted sharply by the advent of new formats such as 3-D and CinemaScope, greatly curtailed production, production among independent producers maintained a steady pace, and provided employment for many cinematographers dropped from major studio contracts.

This survey does not reflect the increased employment of cinematographers in the production of television films, which increased sharply during 1953. Many directors of photography, such as Philip Tannura, Hal Mohr, Karl Freund, William Mellor, Virgil Miller, and Gilbert Warrenton who were associated with major studio production the year before, transferred their talents and activities to television film production exclusively.

This survey does not include the assignments of ASC members located outside Hollywood, such as Jack Cardiff and Freddie Young of England, and Joseph Brun and Don Malkames of New York City — all of whom were consistently active during the year.

The ASC cameramen of Hollywood and their feature film assignments during 1953 follow:

Charles (Buddy) Lawton, Jr.
"Cruisin' Down The River," Col.
"Miss Sadie Thompson," Col.
"Little Giant." Col.
"The Wood Hawk," Col.

Lionel (Curley) Lindon
"Here Come The Girls," Para.
"Sangaree," Para.
"Those Sisters From Seattle," Para.
"Lost Treasure Of The Amazon," Para.
"Casanova's Big Night," Para.
"Legend Of The Incas," Para.
"Conquest Of Space," Para.

Harold Lipstein
"The Great Diamond Robbery," MGM.
"Big Leaguer," MGM.
"Gypsy Colt," MGM.
"Three Young Texans," Fox.
"Drums Across The River," U-I.

Joseph MacDonald
"Nearer My God To Thee," Fox.
"How To Marry A Millionaire," Fox.
"Hell and High Water," Fox.

Peverell Marley
"House of Wax," W.B.
"The Charge at Feather River," W.B.
"The Phantom Ape," W.B.
"The Talisman," W.B.

Ted McCord
"Sulu Sea," W.B.

William Mellor
"Give A Girl A Break," MGM.
"Affairs of Dobie Gillis," MGM.
"Alaska Seas," Para.

Russell Metty
"The Prince of Bagdad," U-I.
"It Happens Every Thursday," U-I.
"Three Were Renegades," U-I.
"Tumbleweeds," U-I.
"Son of Cochise," U-I.
"Magnificent Obsession," U-I.
"Sign of the Pagan," U-I.

Ernest Miller
"Vigilante Terror," Allied Artists.
"The Forty-Niners," Allied Artists.

Virgil E. Miller
"Crazylegs—All-American," Ind.

Hal Mohr
"The Wild One," Col.

Nick Musuraca
"The Blue Gardenia." Ind.
"Arizona Outpost," RKO.
"Susan Slept Here," RKO.

Harry C. Neumann
"Jalopy," Allied Artists.
"Bowery Nights," Allied Artists.
"The Maze," Allied Artists.
"Fighter Attack," Allied Artists.
"Pride of the Bluegrass," Allied Artists.
"Dragonfly Squadron," Allied Artists.
"Bomba and the Green Idol," Allied Artists.
"Paris Bombshell," Allied Artists.

Robert Planck
"Torch Song," MGM.
"The Prisoner of War Story," MGM.

Frank Planer
"Scalpel," Col.
"The Caine Mutiney," Col.

Ray Rennahan
"Arrowhead," Para.
"Flight To Tangier," Para.

George Robinson
"Abbott and Costello Meet Jekyel & Hyde," U-I.
"Echo Canyon," U-I.

Charles Rosher
"Kiss Me Kate," MGM.

Hal Rosson
"Fame and Fortune," MGM.

John L. "Jack" Russell, Jr.
"City That Never Sleeps," Rep.
"The Champ from Brooklyn," Rep.
"Geraldine," Rep.
"Hell's Half Acre," Rep.
"The Outcast," Rep.

Joseph Ruttenberg
"Latin Lovers," MGM.
"The Great Diamond Robbery," MGM.
"Miss Baker's Dozen," MGM.
"Brigadoon," MGM.

John Seitz
"Fort Algiers," Ind.
"Saskatchewan," U-I.
"The Kid From Outer Space," Fox.

Leon Shamroy
"White Witch Doctor," Fox.
"The Robe," Fox.
"King of the Khyber Rifles," Fox.

William Sickner
"Northern Patrol," Allied Artists.
"Mexican Quest," Allied Artists.
"Slade," Allied Artists.
"Off The Record," Allied Artists.

William Snyder
"Second Chance," RKO.
"Son of Sinbad," RKO.
"Rangers of the North," RKO.
"Black Lagoon," U-I.

Cliff Stine
"East of Sumatra," U-I.
"It Came From Outer Space," U-I.
"Wings of the Hawk," U-I.
"Americano," Ind.
"Fireman Save My Child," U-I.

Archie Stout
"Island In The Sky," W.B.
"Hondo," W.B.
"The High and the Mighty," W.B.

Harry Stradling
"A Lion Is In The Streets," Ind.
"Johnny Guitar," Rep.

Robert Surtees
"Mogambo," MGM.
"Fort Bravo," MGM.
"The Long, Long Trailer," MGM.
"Valley of the Kings," MGM.

Leo Tover
"Blueprint for Murder," Fox.
"Man In The Attic," Fox.

Thomas Tutwiler
"The Bridges of Toko Ri," Para.

Paul C. Vogel
"Arena," MGM.
"Half a Hero," MGM.
"Rose Marie," MGM.
"The Student Prince," MGM.

Gilbert Warrenton
"The Great Jesse James Raid," Ind.
"Sins of Jezebel," Ind.
"Deputy Marshall," Allied Artists.
"West of Texas," Allied Artists.

Lester White
"Forty-nine Men," Col.
"Renegade Canyon," Col.
"I Ride Alone," Col.
"Gun Fury," Col.
"Drums of Tahiti," Col.
"Jesse James versus the Daltons," Col.
"Silver Dollar," Ind.
"Adios My Texas," Col.
"The White Stallion," Col.

Harry Wild
"Gentlemen Prefer Blondes," Fox.
"The French Line," RKO.
"The Big Rainbow," RKO.

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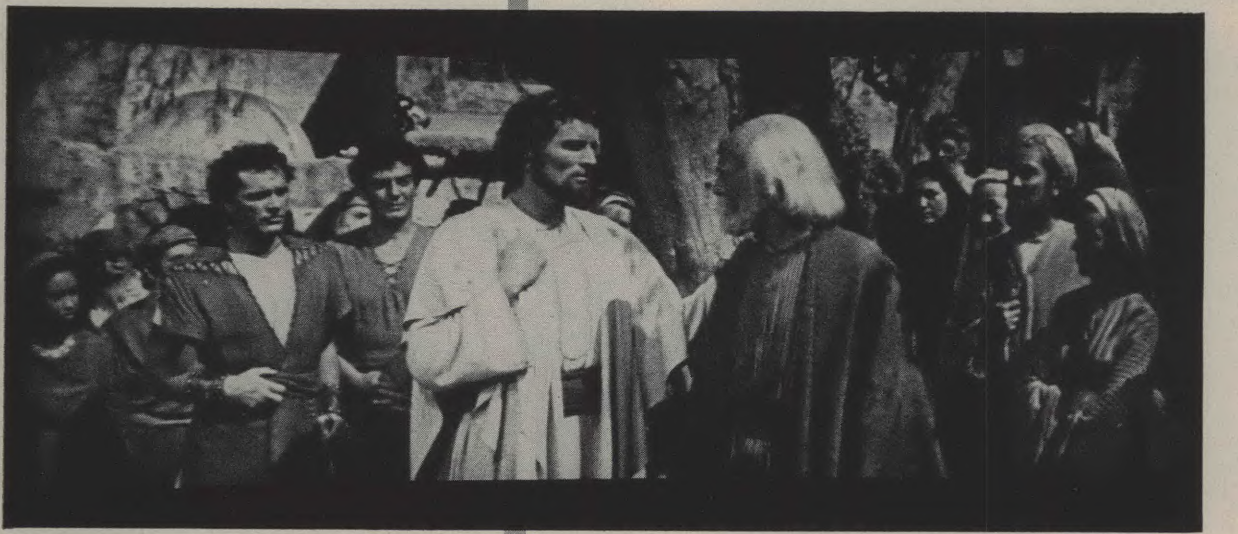

Scene from "THE ROBE," 20th Century-Fox CinemaScope Epic

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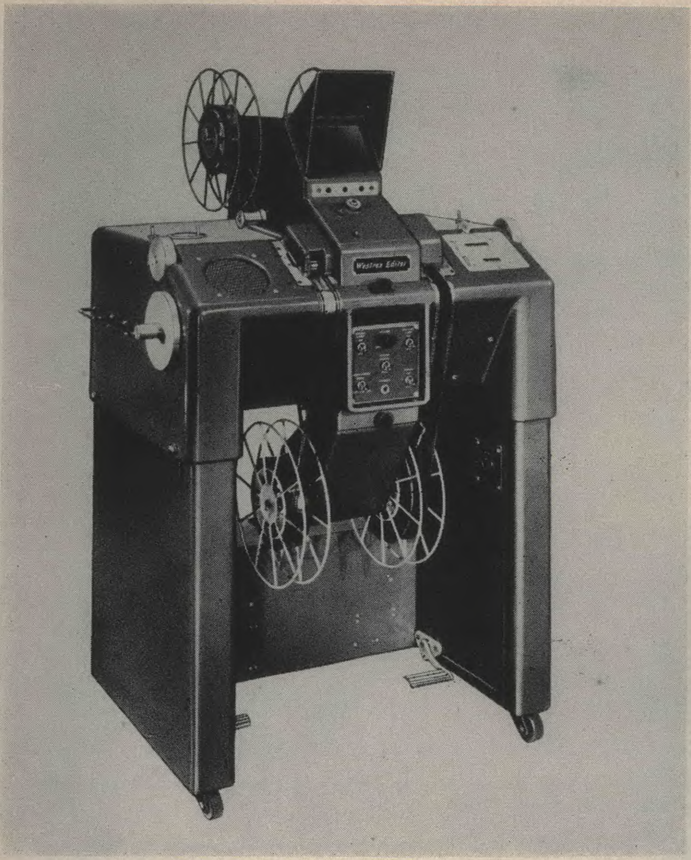

FIG. 1—The Westrex Editer, newest film editing equipment for sound or silent 35mm films. A Unique feature is a device which permits operator to synchronize the sound and picture films while machine is in motion or at rest.

Projection Viewing With The Westrex Editer

Latest editing equipment offers choice of viewing film images projected on wall or screen or on conventional shadow-box screen.

By LEIGH ALLEN

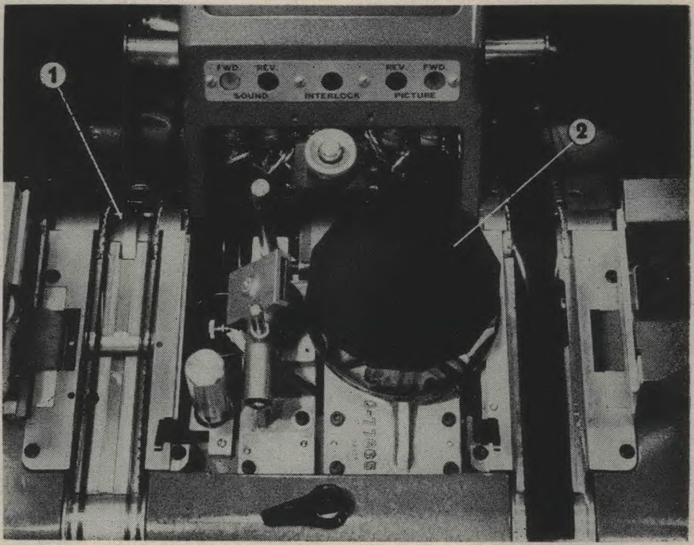

FIG. 2—Film is locked automatically to the drive sprocket (1) and may be removed just as quickly by touch of the hand on the release lever. The picture system employs continuous non-intermittent projection by means of a rotary 12-sided prism (2).

THE NEW WESTREX EDITER for motion picture film, designed and engineered in the Hollywood laboratories of Westrex Corporation, is a single integrated unit which offers many improvements and innovations. One of its more important features is the system of continuous optical projection without use of an intermittent, also the substitution of timing belt drives for gear driven mechanisms, both of which make operation of the Editer virtually noiseless. Of further interest is the fact the equipment can handle both standard and the new small-hole (Cinemascope-Stereophonic) perforated films, film strips, picture films, magnetic or photographic sound films, (single or multiple), and composite release prints.

For the first time, the Westrex Editer makes possible projection viewing of an enlarged image on a wall or screen (Fig. 3) without extra attachments. The projection distance and the resultant picture size are determined according to the auxiliary lens used.

Considerable attention has been given to simplicity and efficiency in operation and to the convenience of the operator. Elimination of the intermittent avoids necessity of a loop between the operator's hand and the machine.

Threading the film has been reduced to a minimum of effort. Due to the smoothness of operation of the rotating prism mechanism, it is possible to feed the film into the Editer without regard to critical entrance angles. Placing the film in the film trap locks the film automatically to the drive sprocket (1, Fig. 2) so that the position of the film cannot be lost. Closing the film gate completes the operation. Removal of the film is accomplished with one sweeping motion of the hand. As the hand approaches the film, a flat lever is depressed which completely releases the film. The hand continues in the same direction and removes the film. Touching a different lever opens the film gate without releasing the film from the sprocket to permit inspection of or marking the film without possible loss of its position in the film trap.

A differential synchronizer permits continuously changing the position of the sound film with respect to the picture film while the machine is either in motion or at rest. Associated with the differential synchronizer is a dial which counts the number of frames required for synchronism in either direction.

The sound sprocket is driven by a constant-speed motor which is controlled by a foot-pedal switch operated by the left foot. The picture sprocket is driven by a variable-speed torque motor which is controlled by a foot-pedal switch and rheostat operated by the right foot. The film sprockets can be operated independently by their respective motors, or the two sprockets can be mechanically interlocked by the operation of a lever and driven by either motor in the forward or reverse direction. Four illuminated arrows on the front

(Continued On Next Page)

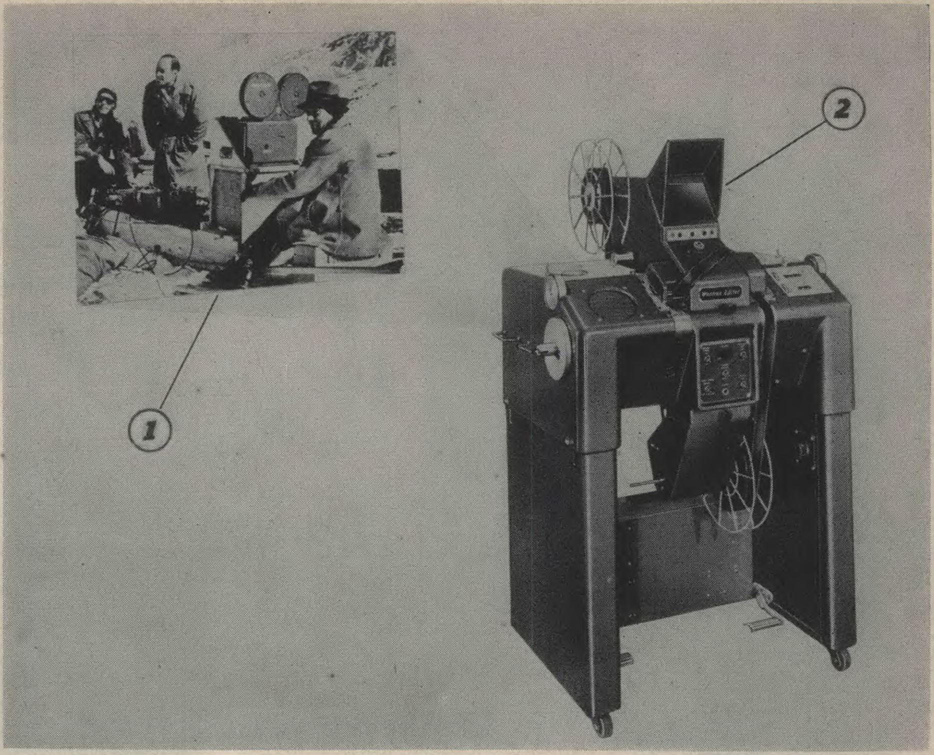

FIG. 3—Another Westrex feature enables operator to project film image on wall or screen (1) instead of viewing it on small Editer screen (2).

panel (Fig. 1) indicate whether each motor circuit is set for forward or reverse operation and a fifth arrow indicates whether the two sprockets are interlocked.

The height of the Westrex Editer is adjustable over a range of 5 inches to accommodate the individual operator in seated or standing position. The two foot pedals are also adjustable back and forth to accommodate the operator's position. Four castors provide mobility while two jack screws insure operation in a stationary position when desired.

An incandescent lamp located within the housing of the 3¾inch by 5 inch view screen provides a shadow box for viewing film.

All of the controls are conveniently located for efficient operation. The center panel contains sound and projection lamp switches, a photographic to magnetic sound transfer switch, a switch which operates the constant speed motor or transfers the control to the foot pedal, a main power switch, a volume control, and a jack for phones. To the left of the center section of the machine are the reversing switch and handwheel for the constant speed motor and the differential-synchronizing control. In front of these is the monitor loudspeaker. To the right of the center section are the reversing switch and handwheel for the variable-speed motor, and the framing control. In front of these is the footage counter reading in feet and frames. An optional, additional counter reading in seconds of time is mounted just below the footage counter. The sound and projection lamps are mounted in cartridge type lamp mountings and are quickly removable from the front of the machine for replacement of lamps.

Just above the control panel is a lever which rotates through 180° to interlock the sound and picture drive mechanisms. The lever operates a coupling consisting of an internal gear meshing with an external gear of the same number of teeth — a one-tooth interval in mesh is equivalent to one sprocket hole. The engagement is spring-loaded by the control lever and the indicator light is lighted only when actual mesh is achieved, which may require the rotation of one shaft by a fractional tooth pitch. A high speed rewind flange is located on the left side of the machine and is normally operated by the constant speed motor.

The picture system employs continuous projection by means of a rotating 12-sided prism, (2, Fig. 2) thus eliminating the noise introduced by the conventional type of intermittent movement. The function of the prism in this system is similar to that employed in highspeed cameras and is proposed for use as film scanners for television. The picture image is projected from the rear on a translucent screen with sufficient light intensity to permit operation in the presence of normal room illumination. The image is 3¾″ X 5″ and of the same orientation as image on the film; that is, the film in the gate is threaded so as to appear upright and properly oriented frem left to right and this relationship is maintained in the projected image on the screen. The movement of a lever shifts the picture to the right to include a view of the sound tracks of a composite print.

Projection of the enlarged image on a wall or screen as shown in Fig. 3, is easily accomplished by operating two controls. A knob control inserts a simple spectacle lens in the optical path below the projection lens, and a second knob tilts one mirror. This second lens is introduced to focus the projected picture without disturbing edjustments of the normal optical system, and its focal length may be chosen to accommodate any given distance.

The optical scanning system is substantially the same as that in general use in theatre reproducers. The magnetic sound head is the conventional commercial type. A four-stage amplifier is used for photographic sound reproduction. One additional stage is added for magnetic reproduction with magnetic reproducing equalization provided. The photographic input circuit contains a narrow dip filter tuned to 120 cycles to attenuate the light modulation resulting from operating the sound lamp on a-c. This feature combined with the relatively high thermal inertia of the 7.5 ampere lamp gives a satisfactory signal-to-noise ratio for this use. A tone control is provided on the amplifier, and there is also an output jack provided at this point to accommodate an extension speaker to be used with wall projection if desired.

The picture film is driven by a variable speed torque motor which, in combination with the foot pedal resistance control, is capable of driving the film at variable speeds from essentially standstill to double normal speed and is instantly reversible while running.

The sound film is driven by an induction motor, which is substantially constant speed, and is equipped with an electrical brake, so that the motor can be stopped within two picture frames. This type of braking is fully automatic and has the advantage of having no braking torque applied when the machine is turned by the handwheel.

Optional equipment includes the stereophonic sound kit, the upper and lower film take-up assemblies, the seconds counter, frame and bag for film strips, and additional sound heads for reproduction of films having sound on multiple tracks. **END.**

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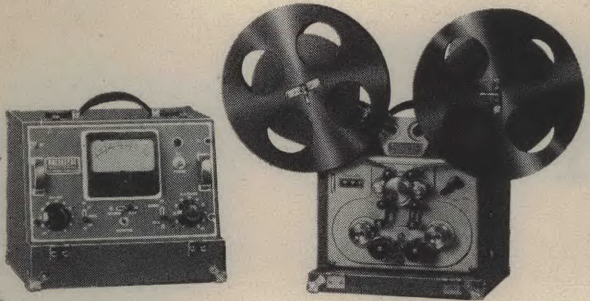

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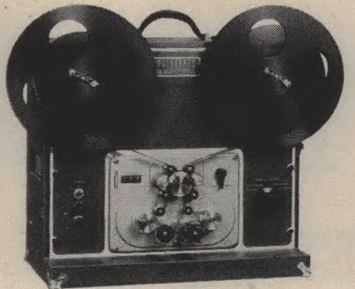

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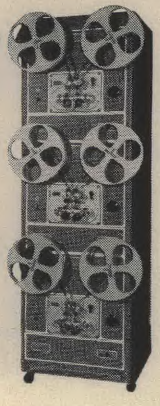

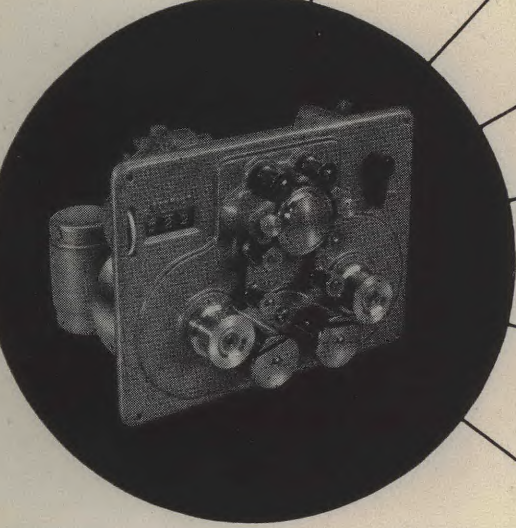

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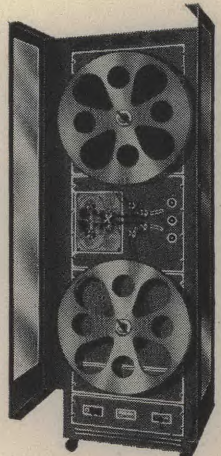
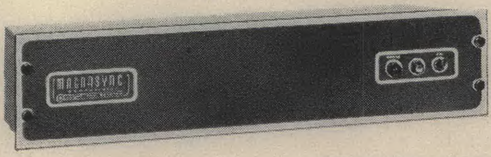


RACK-MOUNT AMPLIFIER WITH SPEAKER



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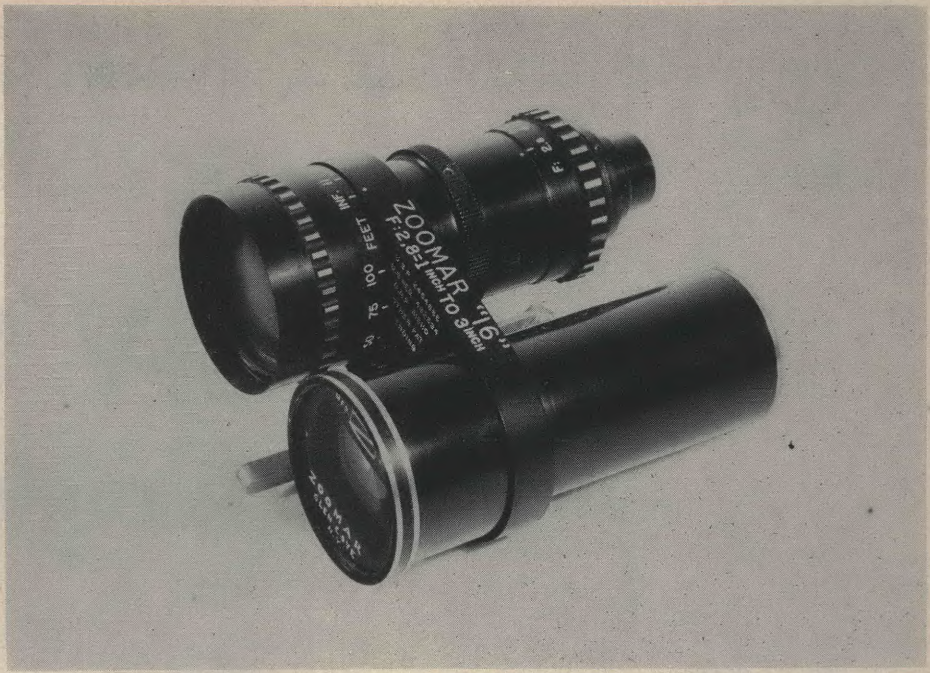
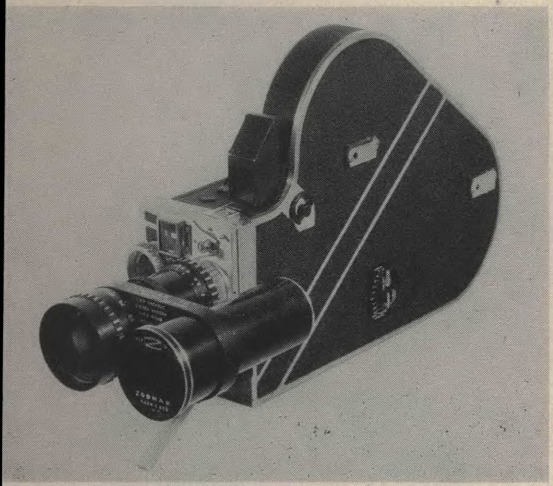


THE ZOOMAR varifocal lens can do the work of all lenses from 1″ to 3″ focal length. It is not only a special-effects lens, but a high-speed, all-purpose lens as well.



THE ZOOMAR in place on the Cine Special camera. No alterations are required in fitting the lens to a wide-range of 16mm cameras. Its total weight is only 1¼ pounds; length 5 inches.

The Zoomar Varifocal Lens For 16mm Cameras

Equipped with a coupled finder that is an integral part of the lens, it has a zoom range from 1″ to 3″ and an aperture range from f/2.8 ot f/16.

By ALVIN D. ROE

THE ZOOMAR "16", a new varifocal lens for 16mm motion picture cameras, has been designed to give the 16mm camera user—whether he be an industrial photographer, a scientist, a news cameraman, an explorer, a TV movie maker, or an amateur intent on building up his own film library—a single all-purpose lens to take care of the majority of his picture-making assignments, including special effects. It has been designed for ease of operation, ease of mountability and ease of portability.

Almost eight years ago, in the spring of 1946, the first Zoomar varifocal lens was introduced and demonstrated at the annual convention of the Society of Motion Picture Engineers. It was hailed as a revolutionary development in the fields of scientific, educational, industrial and commercial motion-picture production.

No sooner had the Zoomar lens become a valuable tool in the motion picture industry when television bloomed into reality. To meet the specific needs of this growing industry, Zoomar engineers created and produced the Television Zoomar. This lens is now standard equipment on television cameras in over 100 TV stations throughout the country. More recently, the Studio Zoomar was introduced. This is a smaller more compact version of the Standard Zoomar for use in telecasting studio shows. Now, out of the same laboratories in Glen Cove, Long Island, has come the new Zoomar varifocal lens for 16mm motion-picture cameras.

Extremely light and compact, it brings to all 16mm camera users, amateur as well as professional, a new height in lens and camera flexibility. For by design, it is not only a special effects lens but a high-quality, high-speed all-purpose lens as well. By being capable of taking the place of all conventional lenses from 1 in. to 3 in. on the camera turret, it makes the long-dreamed-of "one-lens camera" an actuality.

Weighing only 1¼ pounds and measuring 5 in. in overall length, the new Zoomar 16 can be mounted on any 16mm movie camera without altering the camera or the lens. Once in place, picture-taking is easy. Lens settings are clearly visible. The zoom lever is conveniently located under the lens where it is out of the way yet easy to reach and to operate. Simply pushing the lever forward zooms in; pulling it back zooms out. During all zooming operations, the

(Continued On Page 50)

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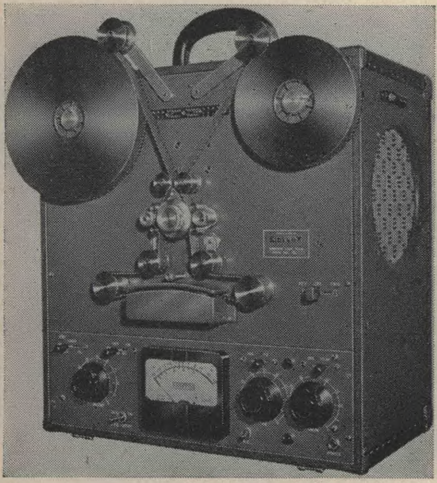
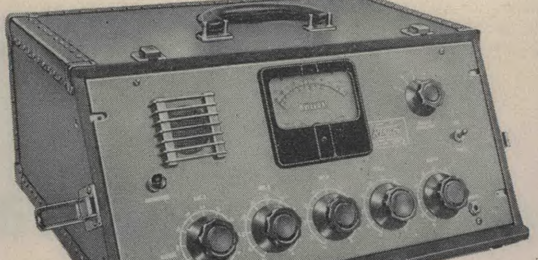
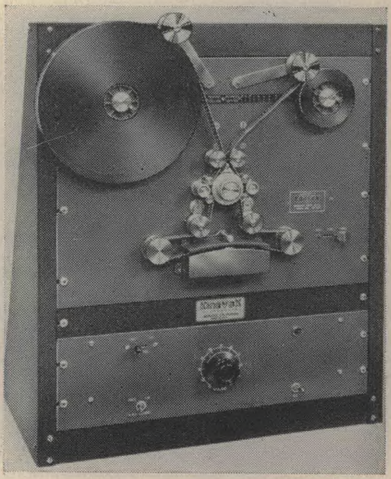


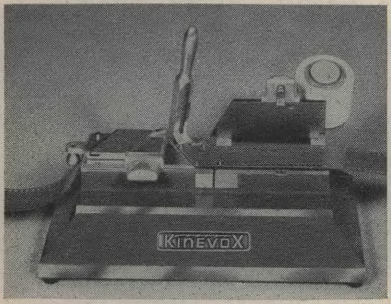
SYNCHRONOUS MAGNETIC FILM RECORDER



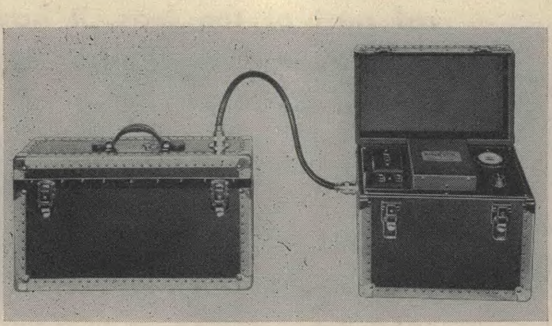
4-POSITION AMPLIFIER-MIXER



FILM PHONOGRAPH



MAGNETIC FILM SPLICER



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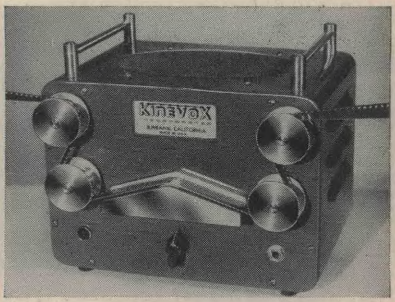

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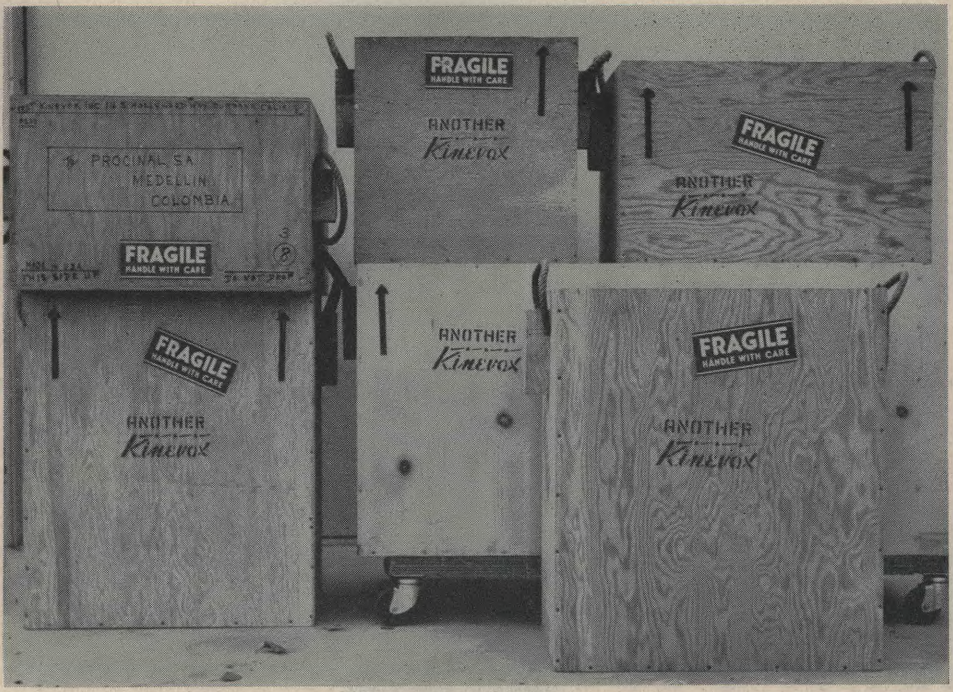

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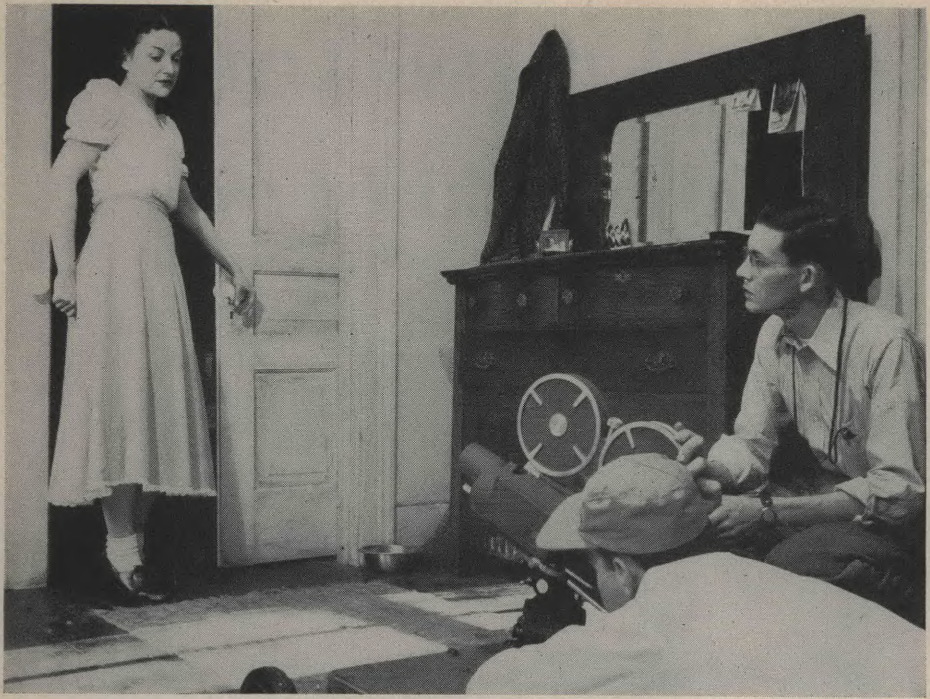

WHEN IT BECOMES necessary to change locales in a sequence in which the subject is moving, let subject WALK out of one scene and INTO the next, thus maintaining a smooth flow of action continuity.

Pictorial Continuity

Camera movement is one of the most effective means of preserving pictorial continuity — so necessary to a coherent, smooth-flowing story.

By CHARLES LORING

PICTORIAL CONTINUITY, in simple language, means the correct *visual* tying together of separate scenes and sequences to form a coherent, smoothly flowing motion picture. It is the factor that gives a pattern of unity to the whole production; it is the blending ingredient which allows the audience to lose itself in the screen narrative, undistracted by the mechanics of the medium.

In the planning of pictorial continuity, the film maker shapes and molds the various scenes so that they will fit into the cinematic whole as smoothly as the pieces of a jig-saw puzzle dovetail together. Each scene is planned so that it contains elements that link it visually with the scenes that precede and follow it.

Pictorial continuity depends upon two factors: composition and pattern of action. The first is the function of camera and lens; the second stems from the movement of characters about the set; but the two are closely interrelated and depend upon each other for force.

When photographing a scene for a motion picture, the cameraman can see at a glance the entire situation and the locale in which it is taking place. In addition, he is able from time to time to take his eye away from the viewfinder and the action which it confines, and refresh his memory as to the general surroundings.

Not so the audience. It sees only what the camera lens allows it to see, and unless the overall locale is first clearly presented or suggested, the audience may feel cheated and remain curious as to the context of the action shown. For this reason, the cinematographer must first clearly establish the general locale of a fresh situation whenever it arises. Since the audience's memory is short, usually retaining the details of only the preceding two or three scenes, the locale must also be *re-established* from time to time.

This re-establishing can be done in a variety of ways — first, by simply backing away to take in a wider angle of the action and surroundings with the lens, or, secondly, by *panning* the subject from one location to another that has been previously established. A third and perhaps the most cinematic method is to link up two elements of the same scene to show their spacial relationship. Here the foreground might include some object or character previously introduced, so that the audience is able at once to re-orient itself by means of this element.

It is all to easy to "lose" one's audience by concentrating on medium and closeup shots too long. Action should be so staged that occasionally long shots fall naturally into the pattern. Thus, closeups should be saved for emphasis, and medium shots used for general action, with cutting to long shots for the purpose of establishing and re-establishing in order to maintain the sweep of the overall scene.

A good example to follow is the basic sequence pattern of long shot, medium shot, closeup, and re-establishing shot. This more or less duplicates the normal concentration of a person viewing a new situation for the first time. Our first glimpse of a subject is normally a long shot. Then, without changing position, we narrow our vision down to a point of view that can be compared with a medium shot. Ultimately, we move in closer for a more concentrated view corresponding to the closeup — the shot, which in any film, is the most emphatic. Finally, we move back or glance about to reappraise the surroundings of the subject.

While this basic sequence pattern is effective and uncomplicated, it is by no means an iron-clad formula; and it should never be followed so rigidly that the sense of the action is lost. In the final analysis, it is the action within the scene that should determine the camera angle and image size to be selected in photographing that particular scene.

The lens, acting as the eye of the camera, adopts a certain point of view for each scene, depending upon the angle and image size which the cinematographer feels best portrays the action.

(Continued On Page 46)

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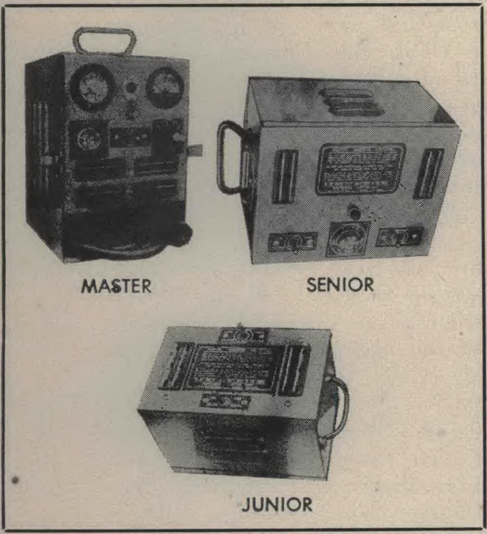

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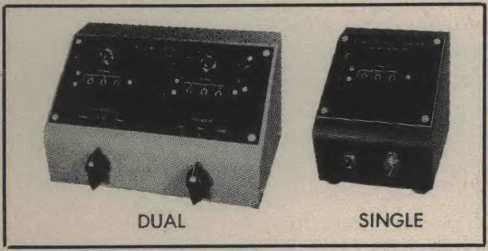

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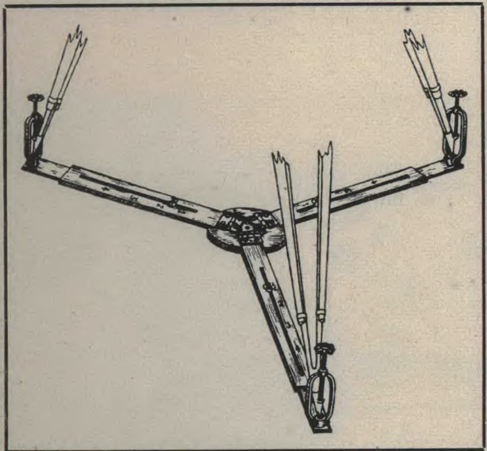

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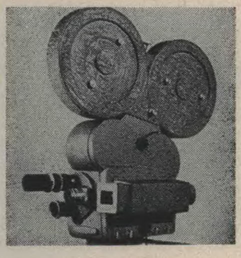

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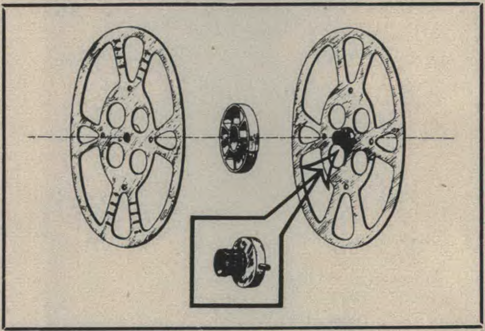

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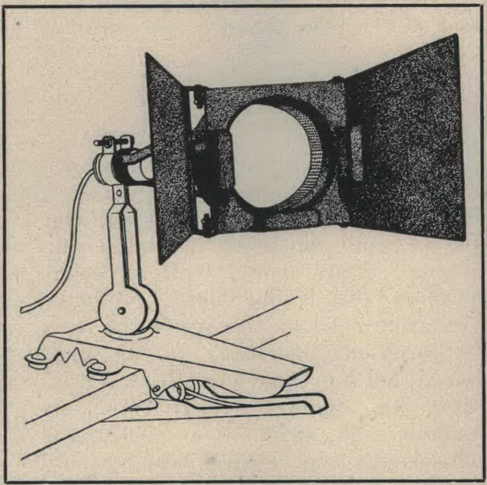

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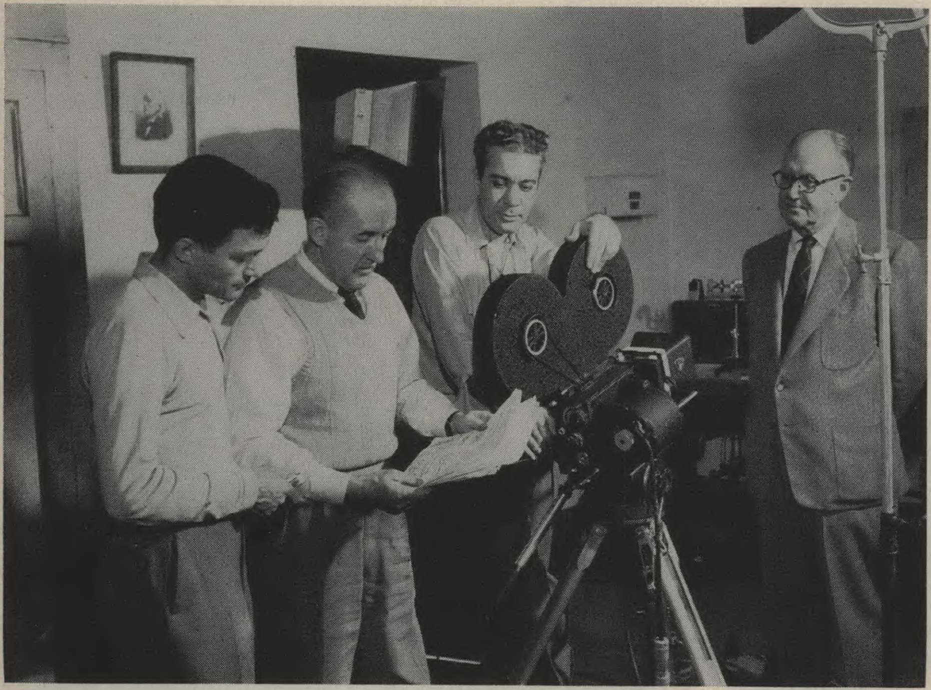
Camera Crews Go To College To Get Material For New TV Film Series

By JOSEPH W. MacDONALD
Staff Cinematographer, Motion Picture Division, Ohio State University



USING A MITCHELL 35mm camera and compact, portable lighting equipment, the crew shot scenes in classrooms and on campus for CBS' new TV film series. Here, checking script, is (l to r) Leo Seltzer, director; cameraman Frank Follette, ASC; assistant Manuel Longinera, and Dr. Samuel Renshaw, psychologist, whose work at Ohio State University was subject of one film in series.

IT HAS OFTEN BEEN SAID, by discriminating members of television audiences and TV critics, that programs of an educational and cultural nature are sadly lacking. Now CBS is doing something about that and it is hoped others will follow their example pending, of course, the success of a recent new venture.

When the Columbia Broadcasting System decided a few months ago to do a series of twenty-six film programs on the subject of the nation's institutions of higher learning, preparation soon got underway to organize technical crews, directors, and production managers to go into the field and film these stories on the spot, using the actual people involved and no actors.

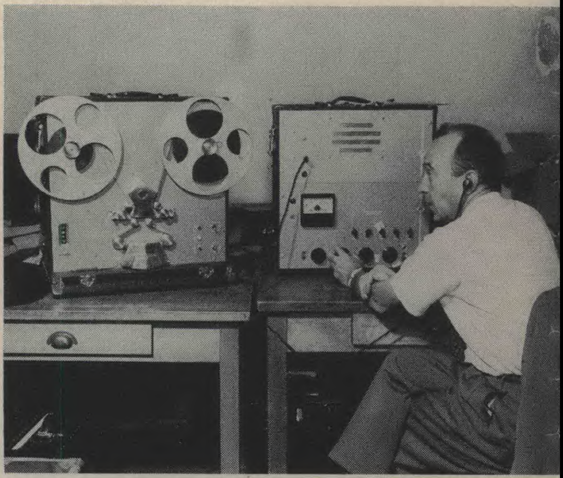
This new TV film series is appropriately titled "The Search," because it depicts the search for greater knowledge that is being conducted in higher educational circles today. Norton Bloom, speaking for Irving Gitlin producer, was excited about the series. He sees the programs possessing a wide mass appeal, but only time will tell. A serious effort was made to select twenty-six examples of outstanding educational achievement and research which would be interesting and comprehensive to the lay public. Thus far they seem to have succeeded in capturing some of the best of such activity. Films have been made at Yale of the child study center, at the University of Michigan's English Institute (spoken English taught in eight weeks), at the University of Minnesota, where five-hundred men are submitting to annual checkups in a study of cardiovascular heart disease, and at Columbia where Oceanography is a big study project.

After several weeks of investigating work at Ohio State University, it was decided to do "Visual Perception" which delineates the work of Dr. Samuel Renshaw, well-known in the field of experimental psychology for his investigations in visual perception. The course of training which he designed to increase visual acuity and speed of perception was used to great advantage by the armed services in World War II. This subject seems ideal for television. Many of the devices Dr. Renshaw has invented or is using are eminently "photogenic", and besides the program will have one thing that probably none of the other twenty-five will have—a sense of audience participation, since many of the visual exercises used in this research can be employed and enjoyed by the audience.

Jerry Brondfield, on loan-out from the RKO-Pathe east coast office, where he is story editor and subject head for short stories, was picked to write the script not only for his writing ability, but because of his familiarity with the Ohio State campus. Jerry received his BSc in Journalism here in 1936.

A company of nine arrived in Columbus late in November expecting to stay for two weeks, but they were able to complete the shooting in seven and one-half days. Leo Seltzer, free-lance motion-picture producer and instructor at Columbia handled the directorial assignment; and Walter Cronkite CBS newsman and commentator came along and remained for three days to appear in some lip-sync sequences with Dr. Ren-

(Continued On Page 42)



USING Stancil-Hoffman portable magnetic recording equipment, sync-sound was recorded for all takes by sound technician Clarence Wall.

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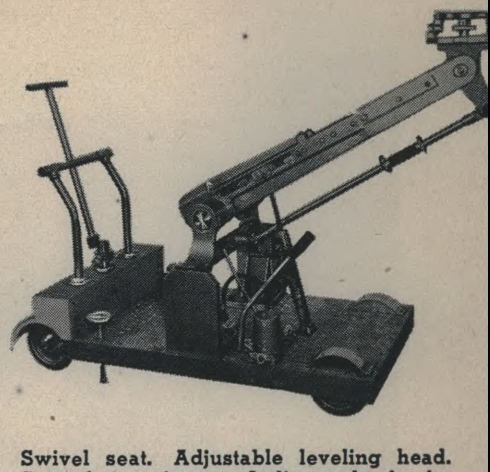

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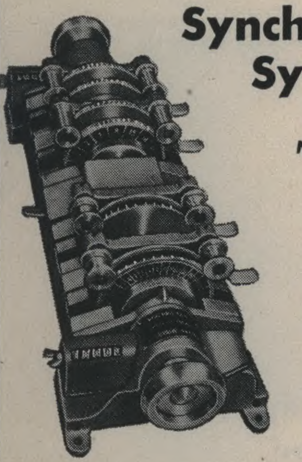

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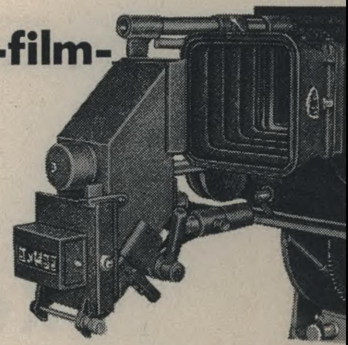

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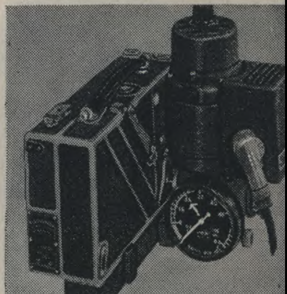

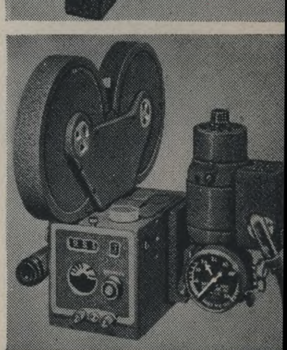

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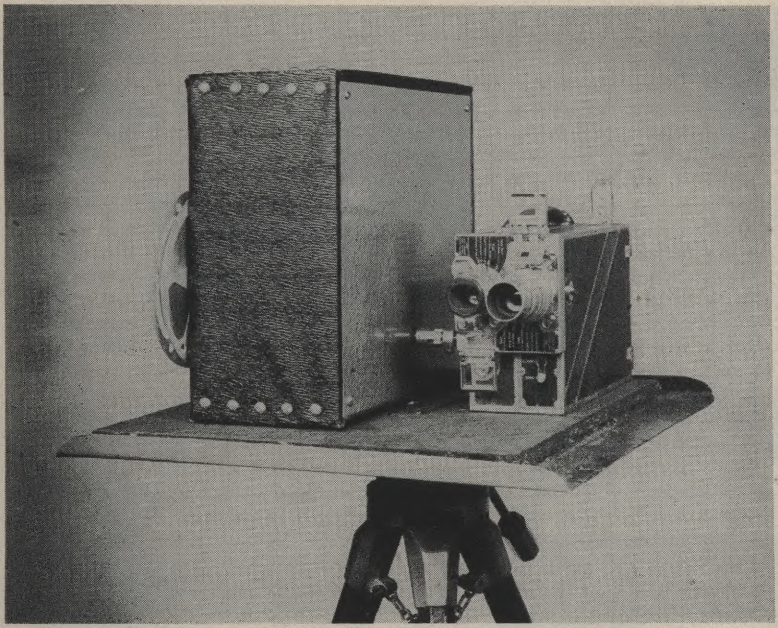


FIG. 1—Author's homemade magnetic film recorder coupled to a Cine Special camera. Sync motor of recorder drives both the recorder and camera. Magnetic film speed is 4.8 inches per second.

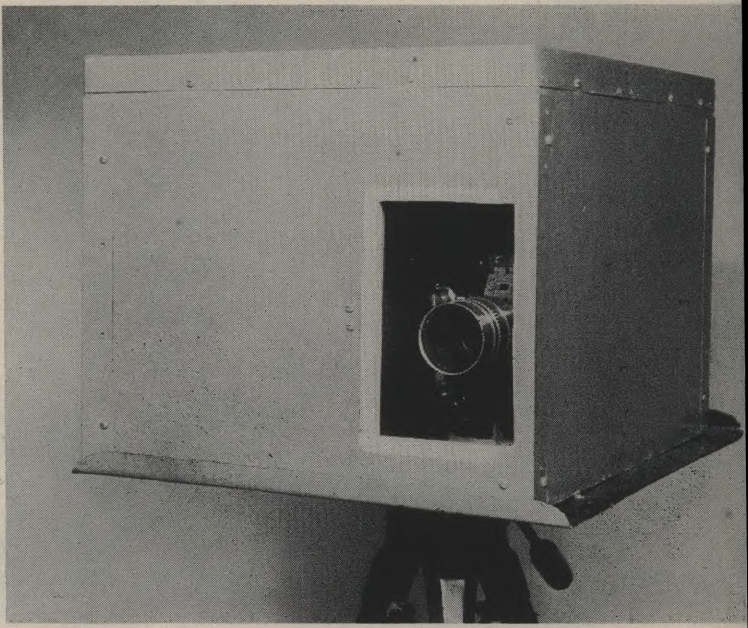


FIG. 2—The same unit shown at left covered with a blimp made of Celotex. Equipment and blimp rest on metal base which has fitting for mounting on conventional camera tripod.

Record Sound As You Shoot

With this homemade magnetic film recorder, which couples directly to and drives the camera, positive synchronization is assured.

By GEORGE W. CUSHMAN

The advent of practical sound recording on tape and film has opened the door for the amateur movie maker who long has sought a simple and relatively low-cost method of recording and reproducing synchronized sound for his films. Today, it is a simple matter for the cine amateur with a leaning also toward mechanics to construct a magnetic recorder that can be coupled to his camera for the purpose of recording a sound track in complete sync with his picture film.

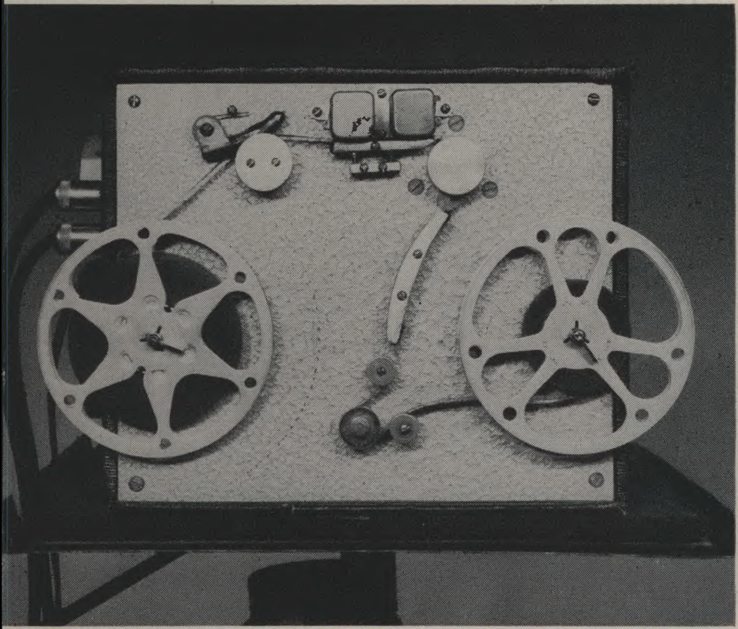
One such piece of equipment is pictured on this and the adjoining page. It is the culmination of four year's work and trial-and-error testing by the writer and Earl Everley, a brother cine enthusiast. In this equipment, we have a recorder which is entirely satisfactory in performance, is easy and economical to operate, and it does practically anything that larger and more costly apparatus will do.

In our early attempts to achieve synchronized sound, we tried a number of ideas including that of coupling the camera and projector to a conventional home tape recorder by means of flexible shafts, etc., only to learn that conventional non-perforated tape will stretch with use and also slip, making accurate synchronization impossible.

Thus we discovered the answer to our problem was perforated tape, or more properly magnetic recording film. The medium we are presently using is made by Minnesota Mining and Manufacturing Company. It has as its base standard DuPont 16mm film, which is coated with iron oxide. It is available in either single or double perforation. We use the latter and split it down the middle, using an 8mm film slitter, so that we obtain two strips of perforated film the width of conventional 8mm movie film, but having 16mm perforations along one edge.

The basic recorder, which appears here as a mechanism enclosed in a box or cabinet, actually has most of its mechanism on the outside panel. There is no amplifying apparatus in the recorder cabinet; instead, we use the amplifier of a conventional home tape recorder, as will be described later. Inside the cabinet is the synchronous electric motor which drives both the recorder and the camera—the latter by means of the coupling shown in Fig. 1.

A shaft extends out from each side of the motor. One end of the shaft is



IG. 3—Front view of recorder. Film travels from left to right. Magnetic recording and monitor heads are at top center. Unit is approximately 10″ X 12″ X 4½″ in size, weighs about 10 pounds.

coupled to the camera, while the other engages the drive mechanism of the recorder, shown in Fig. 3. The motor—a Bodine synchronous, rated at 1/75th h.p.—has been geared down to 120 rpm, which is equivalent to the 16 fps film speed (silent) for the 8-tooth sprocket of a 16mm camera. Since an 8-tooth sprocket is used in the camera, and another is used in the recorder to drive the magentic film, both the picture and recording film travel at uniform speed and cannot get out of sync.

An aluminum panel is mounted on front of the recorder cabinet and carries the film transporting mechanism, recording head, flywheel, dampeners, and spindles for takeup and supply reels. We selected aluminum for the panel because it is light in weight and non-magnetic. The recording head is a Shure model 815, which is one of the few commercially available heads that will accommodate the film width that we use—which is roughly 5/16 inch. Thus far, the head has proven entirely satisfactory.

Construction of the film transport mechanism was not difficult. Our earlier attempts failed mainly because we attempted something more complicated. We found that simplicity was the key to success. In laying out the panel for equipment of this kind, a study of the photographs (Figs. 1 to 3) will provide the reader with a good idea of what is required. It should be noted that the direction of film travel is from left to right — i.e., from the left hand reel in Fig. 3, thence upward to the guide roller with its felt-covered dampener, thence to the recording head, and over the flywheel and down and past another felt-covered dampener. From here the film travels to the drive sprocket (actually is *pulled* by it) and proceeds then to the takeup reel at the right.

This recorder was originally designed to accommodate 400 foot reels of recording film; however, it will also take 200 foot reels, which is the size of the reels shown in the photographs. The latter size are used whenever the recorder is to be used with the blimp, shown in Fig. 2.

The function of the felt-covered dampeners is to smooth out the film flow and prevent any jerky motion which would affect the sound quality.

At the left of the recorder, in Fig. 3, may be seen three power cables. One connects the recording head to the electronic end of the unit; the second connects the monitor head to a small am-

(Continued On Page 38)

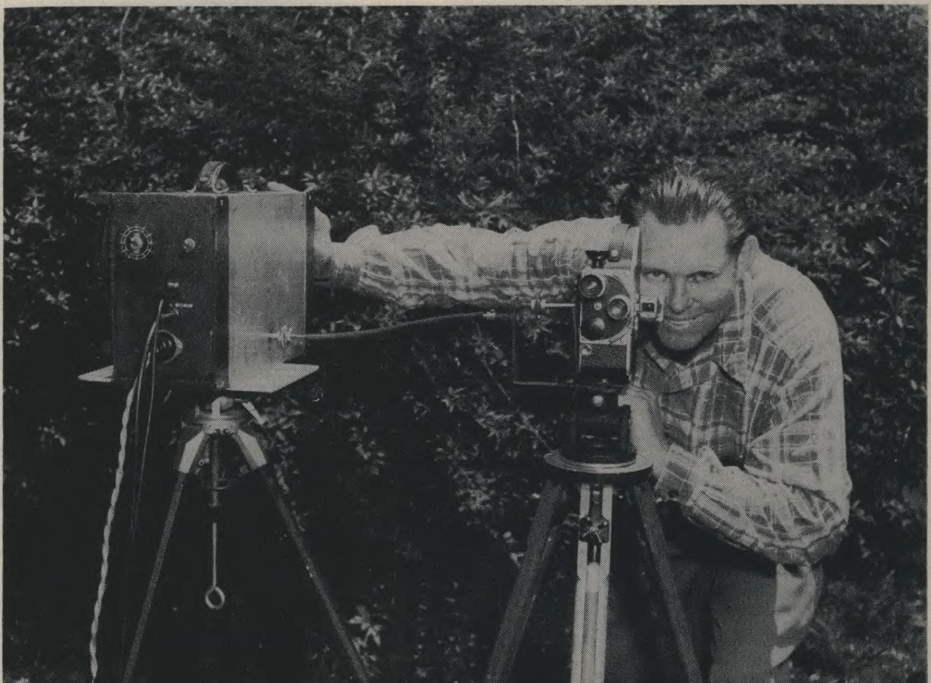


FIG. 4—An early model of author's magnetic film recorder is shown here coupled to a 16mm Bolex camera by means of flexible cable and a reversing gear. Camera operator is Earl Everley of Long Beach (Calif.) Camera Club.

TYPICAL DISTORTION EFFECT that can be achieved in 8mm and 16mm movies with the addition of a homemade distortion lens before camera lens.

Simple Lens Assembly For Making Special Effects

Using low-cost spectacle lenses, you can make a distortion effects device for your camera.

THE VERSATILITY of the amateur movie maker — the serious and inventive amateur, that is—is often exemplified in the unique special effects he achieves with his camera. Whereas the professional has the studio's special effects department to take this work off his hands, the amateur invariably must make his effect shots himself, using his camera plus other items of equipment made for the purpose or improvised.

In this sphere of effects work, the amateur often finds need for a distortion effect — so ideal for enhancing a mystery or "horror" film, or pointing up a comedy sequence. Here the simple, easy-to-acquire auxiliary lens can pave the way to easy accomplishment of such effects.

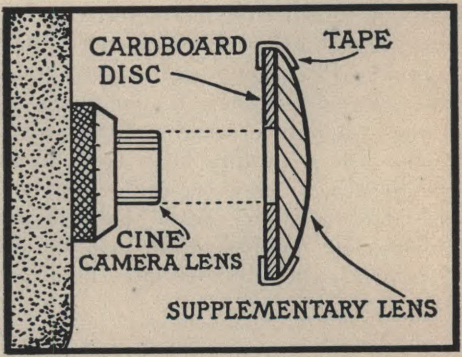
"Diopter" lenses — the inexpensive spectacle-lenses that can be picked up at dime stores or at any optician's — are familiar to most amateur cinematographers. They're useful as supplementary lenses to correct the focus of camera lenses for extreme close-up work, such as making titles or extreme full screen close-ups of flowers and insects.

But they have another use, too: in the proper combination, they can be used to produce deliberately distorted optical effects on the screen. This distortion can be either small or great, as the scene demands. It can be just a slight compression of a scene in one plane (either vertical or horizontal) with an accompanying spread in the other plane, in order to make a landscape composition fill the frame more pleasingly, or to give a close-up something of the lengthened perspective you see in fashion sketches. In this case, the distortion would probably pass unnoticed. Or it can be exaggerated for special effects, such as making a Boris Karloff-like character more menacing, or adding either menace or grotesque to a nightmare sequence.

First of all, though, let's get started with a good understanding of what a "diopter" lens really is, and what it does. "Diopter" is simply the term used by opticians to designate the magnifying power of a spectacle-lens. One diopter is the reciprocal of a focal length of one meter; thus a 10 diopter (10 D) lens would have a focal length of 1/10 meter or 100mm. Diopter lenses are available both as positive lenses, rated as *plus* so many D, and negative lenses, rated as *minus* so many D.

For distortion, we make use of a somewhat more complicated supplementary lens set-up, using two cylindrical diopter lenses—one positive, and one negative — assembled like a simple Galilean telescope. A plus diopter cylinder occupies the objective position, while a minus cylinder of greater power takes the place of the telescope eyepiece, and is placed as close as possible to the camera's lens. Both the axes and the focal points of the two cylinder lenses must coincide. The separation between the two should be equal to the difference in their focal lengths. The magnification produced may be determined by dividing the focal length of the plus lens by that of the minus lens.

(Continued On Page 50)



METHOD of mounting a single spectacle lens on camera lens for ultra-closeup shots. Thick cardboard disc, same diameter as spectacle lens, is pierced in middle to slip over barrel of the camera lens.

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Important Announcement

regarding

American Cinematographer's

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for

16mm Stereoscopic Motion Pictures

Due to the increasing number of applications received from film makers in foreign countries who wish to participate in the Festival, and because the previously announced closing date would preclude getting these entries into the committee's hands in time, the Festival Committee announces that

Date For The Festival

has been set ahead to

MARCH 4, 1954

We are delighted that so many foreign film makers wish to participate in this first of stereoscopic film festivals, and in view of this extraordinary interest the Committee believes that an extension of the Festival date is justified.

The extension will also give many film makers in this country who wish to participate additional time in which to complete and submit their film.

Participation in this Festival is open to all makers of amateur, semi-professional, and professional 16mm single-film three-dimensional motion picures, black-and-white or color. Those whose films are accepted for Festival screenings will receive the distinguished American Cinematographer Merit Filming Award.

Festival Committee

RECORD SOUND

(Continued From Page 34)

plifier, and the third supplies power for the 110-volt 60-cycle synchronous motor. Immediately above is the power on-off switch.

The electronic section of this unit, which is not pictured, is a Brush model BK-401 home tape recorder. Here we have simply disconnected the two wires leading to the recording head of the instrument and in place have connected the leads from our recording head. Any good magnetic tape recorder can be used for this purpose and in a similar way. Some mis-match will occur in this arrangement since the recording heads are of different manufacture, and also because the magnetic film travels past the heads at a speed of 4.8 inches per second in our recorder, whereas the tape speed established for our Brush recorder is 7.5 inches per second. When a recorder such as we have built is made to run at standard sound speed of 24 fps instead of 16 fps, the film speed is increased to 7.2 inches per second, which is close enough for all practical purposes. But even without working over the Brush recording unit to compensate for the slower film speed we use, the results obtained are excellent; it takes a trained ear of an experienced sound technician to detect any difference in quality.

About the cable which runs to the monitor head, which was previously mentioned — this leads to a small amplifier sufficient to "magnify" or intensify the recorded signal on the magnetic film and thence to the monitor headset. The sound operator, wearing the headset, can thus hear the recorded signal an instant after it is recorded. Where the sound is unsatisfactory, or for any other reason, the operator can stop the recorder and camera promptly by flicking the control switch on the recorder. The monitor head is not absolutely necessary, yet it is a safety precaution that we have found paid for itself many times over in the saving of picture film.

You may have noticed that no mention has been made here of the erase head. We do not use one, following the current trend in professional recording circles to omit it, but instead use a "bulk" eraser — a piece of equipment which enables one to erase a roll of magnetic film in a matter of seconds instead of by the old method of running the whole roll of tape or film through the recorder for this purpose. Bulk erasing is highly satisfactory, does a clean job and leaves no sound of any kind or degree on the tape.

No less important component of the recorder is the flywheel, which is the secret of good, flutter-free sound recording. The one we have installed was made to our special order, although any good, heavy, well-balanced flywheel such as commonly used in 16mm sound projectors will work just as well. Our flywheel is free floating, and is not connected to any motor, belt, pulley or any other component of the recorder. The travel of the magnetic film is all that turns it. The wheel is inside the recorder cabinet, just back of the panel, with its shaft protruding. Mounted on this shaft is a hub over which the film rides, and which may be seen in Fig. 3, just to the right and slightly below the recording head. The function of the flywheel is to smooth out the flutter and vibration normally introduced in the magnetic film as it engages the film sprocket. The better the flywheel is engineered, the more efficient it will operate.

Besides the stabilizing effect imparted to the moving film by the flywheel, there is need for still other flutter retarders. Professional magnetic recorders usually employ the patented Davis Flutter Supresser. We have simply used a curved surface in the path of film travel, just before the film engages the drive sprocket, and which is covered with felt. This simple gagdet, which may be seen to the left of the takeup reel in Fig. 3, eliminates a surprising amount of flutter and vibration, yet puts little if any strain on the film. And this was one of the major problems that confronted us — how to introduce flutter suppressors which would do the work expected yet not induce undue pull on the film. For if there is too much pull on the film anywhere along the forward path, the sprocket teeth will tear the perforations and render the film worthless. This is not as important during recording as it is in projection of the film, where repeated use would soon ruin the magnetic film.

By comparison, the film is subject to only moderate strain during recording because it passes through the recorder only once, or twice at the most; for this reason, we have loaded the recorder with pressure in the path of film travel. The first pressure pads, plus the pressure applied under the two heads, plus the inertia of starting the flywheel, plus the pull of the felt-covered curved track is just about all the film will take. We have run the same film through the recorder as many as 30 times without even the slightest damage evident in the perforations.

As for other components in the recorder, the sprocket wheel used is one commonly used on an 8mm movie projector. Originally, it had 16 teeth (for 8mm film perforations), so it was necessary to file off every other tooth, leav-

(Continued On Page 41)

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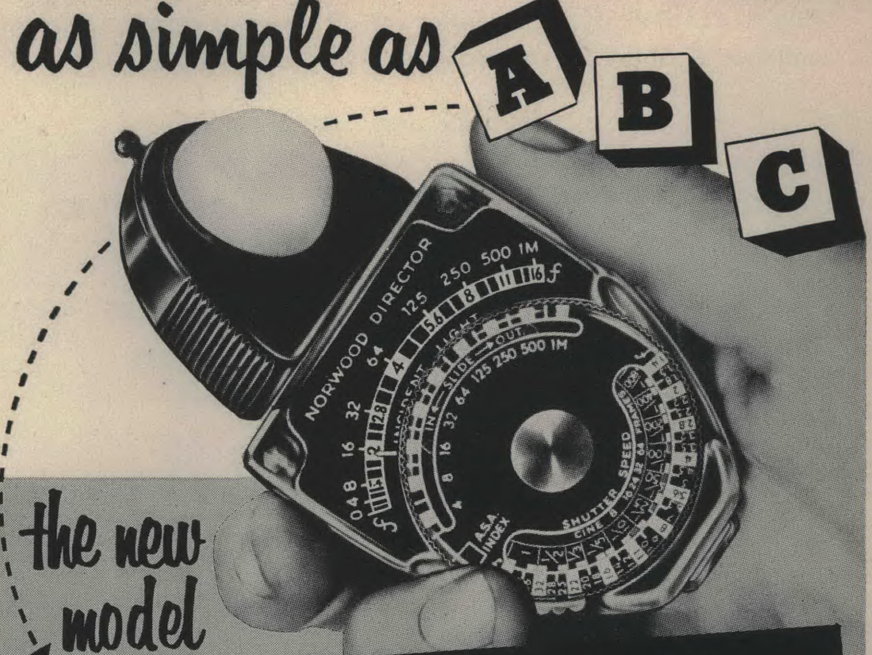

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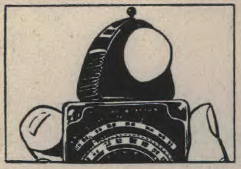

You point the Photosphere at the camera position

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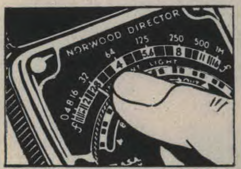

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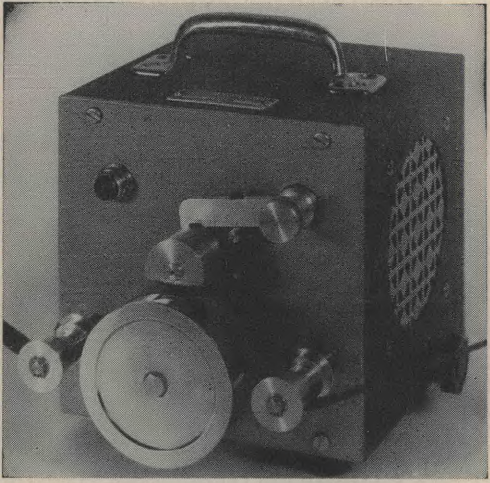

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Editor:—

I have the following odd footage in 16mm color to offer. Will trade depending on what footage is offered in exchange:

125 ft. of scenes at amusement park at Long Beach, Calif.; 25 ft. of boats passing through government locks at Seattle, Wash.; 10 ft. of hair seals sunning on rock-bound coast of Oregon; 45 ft. Alcatraz Island prison, San Francisco skyline, and Bay Bridge taken from a ferry boat; 30 ft. Navajo Indian woman weaving a small rug; 100 ft. native Indian tribes staging costume dances on South Rim of Grand Canyon, Arizona; and 90 ft. of ASC-member Tom Tutwiler shooting scenes for the U.S. Air Force in Fairbanks, Alaska in wintertime.

—Harry R. Reynolds,
906 Marshall Drive,
Midwest City, Okla.

Editor:—

I have for years collected 16mm film of interesting and unusual railroad scenes, especially narrow-gauge railroads. Please list me in your "Odd Shots" column as desiring 16mm black-and-white footage of interesting railroad subjects. Especially want footage of the suspended monorail railway in Wupertal, Germany and narrow-gauge railroad scenes from any foreign country, including the Darjeeling & Himalayan Ry., in India.

—Charles Keevil,
1841 Lincoln St.,
Evanston, Ill.

Editor:—

I have 16mm negative and/or positive, single and double-perforated film, of a wide range of subjects, which I have been accumulating during the past 15 years. Footage includes war subjects, Italian subjects, cultural pageants, interesting places, sporting events, folklore subjects, etc. Will also shoot footage of local scenes or subjects in most areas of Italy, Switzerland, and Germany on request.

—Enzo Monachesi,
5 Via Poliziano,
Milano, Italy.

RECORD SOUND

(Continued From Page 39)

ing the required 8 to engage the perforations of our magnetic film.

The magnetic heads are "split heads" — that is, they are intended for dual tracking. The perforations of our recording film pass over the dead half of the head, leaving the live half free to contact the usable portion of the sprocketed magnetic film.

The takeup reel spindle is connected by belt and pulley at rear of the panel to the motor shaft. The sync motor has sufficient power to handle this slight extra load without affecting the film speed or recording results.

A synchronous motor was selected for two reasons: first, we wanted absolute uniform film speed in both camera and recorder; second, we wanted the unit to be able to operate with other units which also operate with synchronous motors. At one time, we intended to install a separate sync motor on the camera, but since the present setup is so compact and operates so successfully, it is doubtful that we shall ever consider the more complicated method of operating the two units separately, thus necessitating the use of clapsticks and tedious editing and syncing problems.

In using the recorder with camera, our procedure is to mark the first frame (actually the point of contact with the head) of the magnetic film with a grease pencil. This coincides with the first exposed frame of the picture film, making it easy to match up the starting point on each film when it comes time to edit or project. In playing back the picture and sound films, they are set to start at the marked "start" frames. Because both camera and recorder are mechanically interlocked and operated by the same sync motor, complete synchronization is assured throughout the screening of the entire reel of film, regardless of how many times the camera was stopped or started during production — a most economical feature no other double system provides.

Fig. 2 shows the blimp constructed for use when the equipment is being employed in filming action at close range to the microphone. It is made of panels of Celotex, securely bound at the corners with metal strips. The porthole for the camera lens is of high-quality plate glass, and there is another and smaller glass-covered port at the rear which affords the cameraman a view through the camera finder during filming. The blimp simply rests on the sheet-metal base which has a Celotex pad on which is mounted the coupled recorder and camera. There is accommodation for the tripod screw underneath the base, which permits mounting the whole

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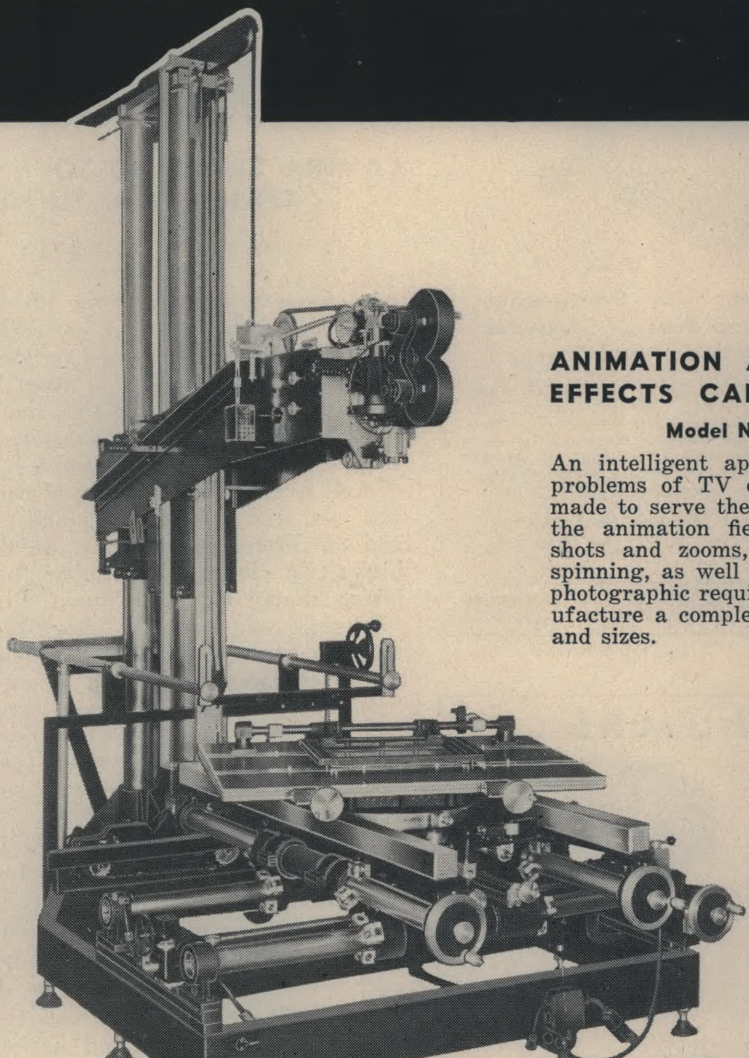

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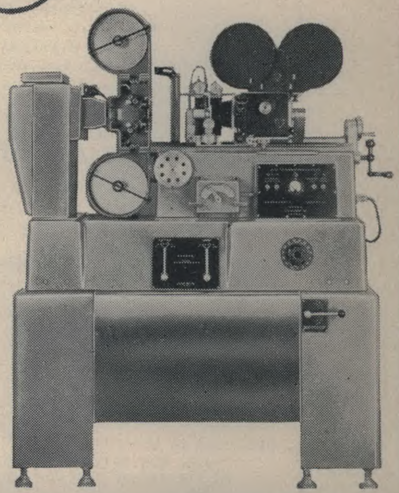

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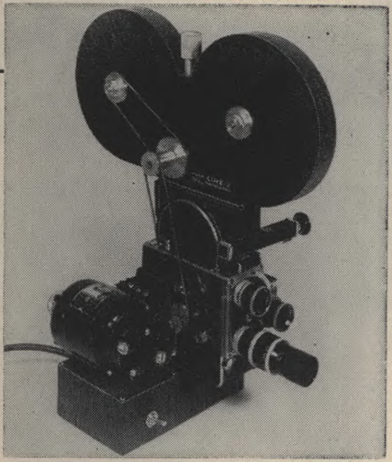

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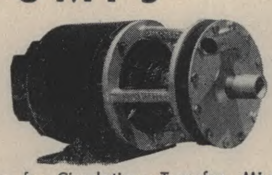

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unit on a camera tripod, as pictured.

Coupling the recorder to the camera has not presented any serious problems. Thus far, it has been used with a Cine Special and a 16mm Bolex. Direct coupling is achieved with the Cine Special through the camera's 8 fps shaft. With the Bolex, a reversing gear is necessary — a simple mechanical device which is shown just to left of the camera in Fig. 4.

The equipment which we designed for playing back and projecting the sound films made with this apparatus will be the subject of an article next month.

CAMERA CREWS GO TO COLLEGE FOR TV FILMS

(Continued From Page 32)

shaw. Later he will record the off-screen narration to the edited work print.

Photographic and sound recording equipment was shipped out from New York via air express and the company traveled by train. Camera equipment consisted of a Mitchell NC and a Bell & Howell Eyemo. The Mitchell, of course, was used with a blimp for sound takes, and the Eyemo proved very useful for high-angle closeups and other "wild" insert shots. Eastman 35mm Plus-X film stock was used and about twenty thousand feet was exposed. Lighting equipment was held to a minimum. Several colortran units and about a half dozen 750-watt spots, occasionally supplemented by daylight coming through the laboratory windows, proved adequate.

Veteran cameraman Frank R. Follette, ASC, and his assistant Manuel Longinera performed some amazing feats of cinematography under rather difficult conditions where camera movement was very restricted. Each evening the day's exposed film was air-expressed to the laboratory in New York and the following afternoon a report on the negative was received. All reports were favorable and shooting proceeded smoothly.

Sound man Clarence Wall was forced to make some improvisations. A more versatile mike boom than the one brought along was borrowed from the local CBS affiliate WBNS-TV. It was also necessary to bring in a number of floor pads and to purchase some soft Celotex panels to improve the acoustics and extend the reverberation time of the laboratory and class room walls.

Two electricians were recruited from the local stagehand's union to handle the lights and make the necessary connections for electric power. And from time to time it was necessary to call on the Service Department of the University for the use of trucks, and two to four men to move equipment.

Miss Daisy Sickles, writer and editor for the University's Motion Picture Department, acted as script girl. She turned in an excellent job daily and worked extra evening hours typing script changes and revisions.

I was temporarily relieved from my job as staff cinematographer to act as assistant director. The work proved very interesting and many valuable tips were received from cameraman Follette.

Mr. Seltzer and Mr. Kandel, unit manager, both expressed their appreciation to those on the campus who, on very brief notice, helped with the numerous details involved in the undertaking.

Exact scheduling is incomplete for the presentation of this series, but it is believed the programs will take the air late in January or early February in a choice Sunday afternoon spot.

WATER SKI BALLET

(Continued From Page 19)

forty expert skiers recruited from the famed Cypress Gardens water show and from aquatic carnivals throughout the nation. In the picture story, Miss Williams is star of the Cypress Gardens show managed by Van Johnson. In love with the unresponsive Johnson, Miss Williams—while both are in New York on a business trip — arouses Johnson's jealousy when a nightclub singer (Tony Martin) makes a play for her. But she returns to Cypress Gardens and to Johnson, and gives her all in the stunning water ballet, which ends with Johnson finally admitting his love for her.

It is the big, spectacular ballet that is easily the film's outstanding attraction, and Ray June and his camera crew did a remarkable job in filming so vividly the pageant of skiers, with their colorful costumes, backdropped by grand Florida scenery and the sparkling green waters of Winterhaven's Cypress Gardens.

Only a cameraman of June's ability and experience could have filmed it so successfully, and particularly with the skill he has demonstrated for implementing continuity of action.

The ballet sequence, which runs for seven minutes on the screen, required approximately four weeks to produce, including time spent in shooting tests and rehearsals.

"To start with," said June, "we had to do a lot of testing of helicopters and pilots. We finally chose a man from Ventura, California, who had a 'copter that operated with the minimum of vibration." The helicopter was a vital cog in the studio's plan to give spectacular scope to the water skiing numbers by shooting them from the air. This could not be done satisfactorily from a plane, and could only be done from a helicopter that was in excellent condition mechanically.

"It was necessary to mount the camera on the 'copter," June explained, "so that we could shoot towards the rear. In this way, we could travel just ahead of the skiers and film them in a running shot. To mount the camera, it was necessary first to extend a heavy plank out from the pilot's compartment and secure the camera to it by means of a hi-hat mount. Obviously, this meant little room for the camera operator, and because the weight capacity of the 'copter was limited to the equivalent of the pilot, the camera, and one camera operator, it was obvious that I would have to serve as operator in most of the shots — which I did."

Of course, not all the shots were made from the air. A larger percentage of the action in this sequence was shot from a motor-boat — which became virtually a water-borne camera car. This boat is the property of the Cypress Gardens operators, who employ it in their own vast photographic operations, and who loaned it to the studio for shooting the water ballet scenes. Thus the company found itself better prepared to shoot the water scenes perhaps, than if it had brought along its own equipment or improvised after arriving on the location. The boat was fitted out especially for photographic work and included such equipment as a tubular metal parallel, adjustable from four to twelve feet in height. The boat operator had a wealth of experience in piloting the boat for motion picture photography, which greatly simplified filming operations on the water for June.

Filming from this boat, especially from atop the twelve foot parallel, proved to be the toughest part of the whole picture assignment. "It was the most difficult photographic job I have undertaken," said June. "It was real tough trying to keep my balance and run the camera at the same time. We couldn't have two men on the parallel, so I handled the camera myself most of the time on these shots. There was always a lot of side-sway to fight, and at the same time there was always the fear that the camera would be jolted from its moorings, although it was tied down as securely as it was humanly possible to do.

"Believe me, I was a busy guy! We put a double head on the tripod so I could keep the horizon line level at all times. I had the freehead handle under one arm, and operated the tilt crank

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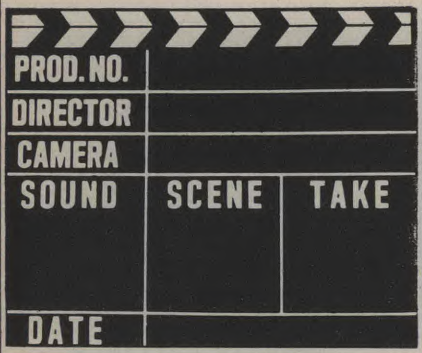

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with one hand and the pan crank with the other — all the time trying to keep my balance atop the parallel — a matter which injured the metatarsal arch in my left foot."

From the standpoint of photography, the company really had only one good day when the weather was calm and the water smooth. All the rest of the time the wind blew strong and the water was so rough that often there was doubt that the water skiers could remain long on their skis.

"I still marvel at how those kids could stay on their feet!" said June. "In doing the big numbers, there were eight motor boats pulling the skiers, and the camera boat and three pickup boats all on the water at the same time. What the wind didn't do to churn the water, the boats did, making it difficult for the skiers to execute their routines."

Perhaps the reader can get a more vivid picture of this unique photographic undertaking by reviewing the photos at the beginning of this article. For instance, before Miss Williams and the skiers took to the water, the routine they were to follow was first explained by the director, using diagrams on a blackboard. Fig. 1 shows director Busby Berkeley explaining a routine to Esther Williams. Because of such careful planning, retakes were kept to a minimum.

Fig. 2 is a shot from the helicopter and shows the tow boats and three groups of skiers in formation for the big massed number, which marked the closing footage of the picture. It is one of the most spectacular aerial scenes ever photographed. The waterspouts shown here are two of a series and were produced by an unusual arrangement worked out by the studio. They contributed a breathtaking pictorial touch to this particular routine.

For this, the studio drove a row of telegraph poles into the bed of the lake at intervals, leaving the tops just a foot or so beneath the water surface. On top of each was mounted an assembly of twelve short water nozzles, each of which was attached to a length of firehose which ran to a pipeline on shore. Through this network of pipes, hose, and nozzles a battery of water pumps powered by 200 hp motors generated the tremendous flow necessary to create the artificial geysers. As the skier groups approached each geyser, a switch automatically started the flow of water. This entire routine was filmed from the air with the aid of the helicopter.

Fig. 3 is a closeup view of the camera boat with the unblimped Mitchell camera mounted on the four-foot parallel. Miss Williams, standing with water skis submerged, is ready to take off for a closeup shot.

How such closeups were filmed is shown in Fig. 4. Here a short boom

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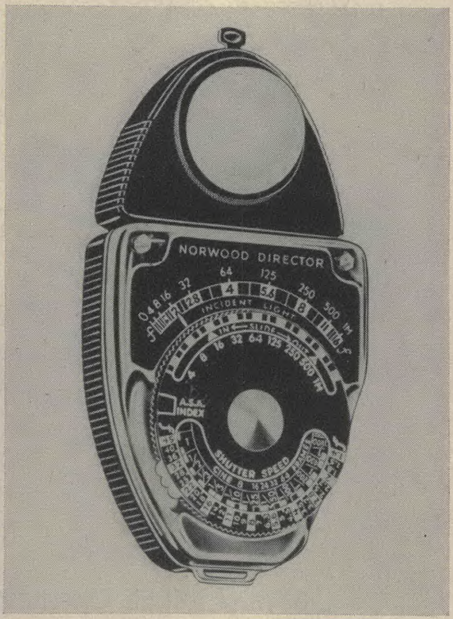
New Norwood Meter Features 'Color-Matic' Control



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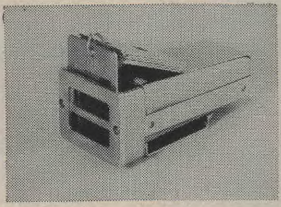

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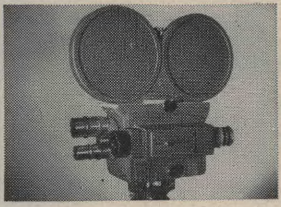

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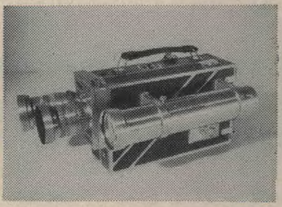

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extends from prow of camera boat, to the end of which extends a short length of tow line held by Miss Williams. As the boat moved in the water, Miss Williams glided along with it, so that there was no problem of keeping her uniformly in focus and in frame during the shot. Both closeups and full figure shots of Miss Williams were filmed with this setup by changing lenses and using two cameras.

Note also the reflector which is being held with difficulty by members of the camera crew, and which furnished the necessary booster light. Reflectors, incidentally, were the main source of fill light on all shots of this kind; but they proved a serious problem when used in high winds, which made them almost unmanageable. Three were lost when they were torn from the hands of crewmen and flung overboard by the wind.

The manner in which the follow shots of the skiing groups were made is shown in Fig. 5. Here two cameras are mounted on the camera boat — one on the twelve foot platform of the parallel, and the other at a lower level on a tripod secured to the deck of the boat. Here it is easy to imagine the operational problems encountered by Ray June, who is behind the camera in this shot, up on the twelve-foot parallel.

The unique pictorial composition secured by the lower camera in this

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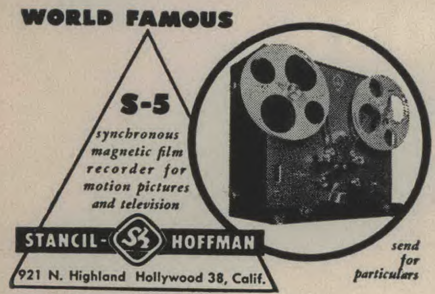

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operation is pictured in Fig. 6. Here Miss Williams leads a group of skiers in one of several routines as the camera boat moves close to shore in order to get the picturesque trees for a backdrop. Note how the tow ropes form an interesting compositional pattern.

The rough going encountered by the intrepid water skiers in many of the routines is pictured in Fig. 7. This scene depicts Miss Williams (a double was used here) diving from trapeze of a helicopter, in what is the beginning of the grand finale shot of the picture.

Fig. 8 shows how the action of Miss Williams coming up out of the water to grasp trapeze of the 'copter was filmed in closeup. Special rigging mounted atop the twelve-foot parallel extends out to one side. From this is suspended the trapeze, which was progressively shortened in length by crewmen operating ropes from within the boat, thus lifting Miss Williams out of the water, as though by the helicopter itself. Ray June filmed this action with the Mitchell camera mounted on tripod just under the parallel.

For aerial shots of the massed water skiers, the helicopter mounting the camera was invaluable, as shown in Fig. 9. Its wide range of maneuverability enabled June to get shots that would have been impossible from a plane.

The grand finale of all this was staged and shot on the back lot at MGM studio. The setting, pictured in Fig. 10, was erected on the studio lake on the lot. In this shot, Miss Williams comes through the opening at the rear and lands with skis on the water, from where she is immediately elevated on the rising pylon in center of the pool, seen just behind the large geyser of water. This setting, as well as the geyser formation described earlier, was the incredible work of the highly imaginative MGM art director Jack Smith and his crew.

Ray June credits Bob Eastman, technical man at Cypress Gardens, for easing the way for him and his camera crew. It was Eastman who made the camera boat and the parallel available, and who aided in rigging up the tow boats and other craft necessary to filming the water scenes. Eastman said that when the big group scenes were being filmed, it was the first time that so many people performed on water skis at one time at Cypress Gardens—perhaps anywhere in the world. When MGM technical men first proposed it, the Cypress Gardens management said it simply couldn't be done.

It was a monumental task keeping forty skiers, eight tow boats, two camera boats, and three pickup boats in line and performing to plan. Just keeping all forty skiers on their feet during the routines was a tremendous task in itself. "It required an awful lot of rehearsing just for the boat drivers alone," said June. "They had wind, rough water and currents to contend with. Also, although all tow boats were of the same type and size and were all powered by the same type motor, it was sometimes difficult to keep all of them moving at uniform speed, thus creating a tedious job for the drivers."

Although Technicolor 3-strip film was used on the rest of the picture, the studio elected to shoot the ballet sequence with Ansco Color, which would enable June to use a lighter, single-negative camera instead of the heavier and bulkier Technicolor camera. In cutting the picture, the studio was obliged to intercut some three-strip footage with the Ansco Color, which caused some difficulty in making the final release prints. The color characteristics of the two films are quite different.

All footage for the water ballet sequence was shot with Mitchell 35mm cameras and a Bell & Howell 35mm studio camera, the latter used in shooting from the helicopter. No hand-held cameras were used at any time. All film was shot at standard sound speed of 24 fps—that is, none of the footage was shot at other than normal speed in order to gain some special effect.

"All in all, we had a lot of fun doing the sequence, despite the disappointing Florida weather," said June.

PICTORIAL CONTINUITY

(Continued From Page 30)

Therefore, every transition to another scene or sequence represents a shift in point of view. These changes should be clean and definite, but made with a sense of flow from one to the other, permitting an uninterrupted unfolding of the story.

In order for the two scenes to cut together smoothly, the composition must be changed, either by moving in closer to the subject, by using a different focal length lens, or by chang-

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ing angle completely. If two scenes showing continuous action are shot from the same or very similar angles, a disturbing "jump" cut will result.

If, on the other hand, too great a change of angle is made in cutting to another scene, the audience will be jolted and momentarily lost. Therefore, should it be necessary for a radical change of angle to be made, the jolt may be minimized either by momentarily cutting away from the scene, or by using a *dolly*, *pan*, or *follow* shot to lead the audience smoothly from one composition to another.

Here, the moving camera comes into its own, for it is the smoothest possible way to change composition without losing the audience. Used correctly, it can link up two to ten or more separate compositions within a single scene, at all times preserving the relationship of one component with the rest.

In sequences which show a subject moving or facing in a certain direction, it is important that each scene preserve a consistency of screen direction, regardless of the size of the shot.

For example, where a character is shown walking down the street from right to left, it would be a disturbing jolt to the audience if in the following scene he were shown going from left to right. It would appear as though he

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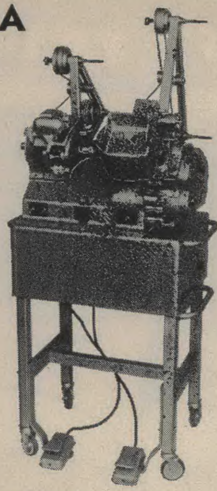

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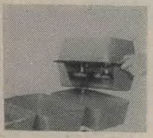

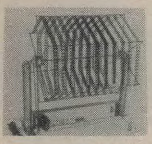

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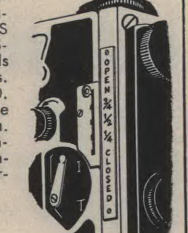

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were retracing his steps. Actually, this is an error which is all to common in the films of many professionals as well as amateurs.

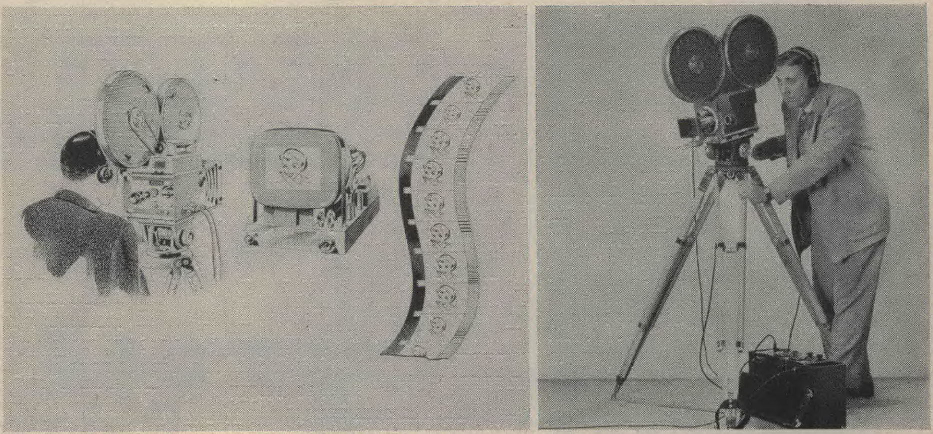
If, however, it should become necessary to change direction suddenly, the jump can be minimized by showing the subject turning a corner, by cutting to a neutral (straight-on) shot of the subject, or by cutting away momentarily to another segment of the situation.

The reverse of this approach can sometimes be used to good advantage in order to show conflict between two opposing elements, such as a couple of locomotives rushing toward each other from different directions (as in Paramount's "Denver & Rio Grande"). By *intercutting* shots of the two locomotives roaring toward each other, a certain forceful suspense is created.

Where it is desired to change locales in a sequence in which the subject is moving, let him walk *out* of one scene and *into* the next. Unless this is done, there will be a disturbing jolt as the background behind subject suddenly changes completely in character. If this change also involves a lapse of time, it is better to *dissolve* or use a *wipe* effect rather than *cut* directly from the one scene to the other. In such case, the subject should *not* leave the frame.

Sometimes the entrance and exit of a character or subject into and out of a scene involve diagonal lines of action, so that the subject enters or leaves from one corner of the screen. In such a case, it is important that a consistency of screen geography be maintained. Thus, if subject leaves the frame (facing the camera) at the lower right corner of the screen, he should enter the frame of the following scene (facing the camera) from the upper left hand corner. But if, in the second scene, he is walking away from the camera, he

New Shutter Converts Auricons For TV Recording



SCHEMATIC at left shows method of using Auricon "1200" camera with "TV-T" shutter for kinescope recording. Photo at right is the Auricon "1200" equipped with "TV-T" shutter and 1200-ft. film magazine, which provides 30 minutes of continuous filming.

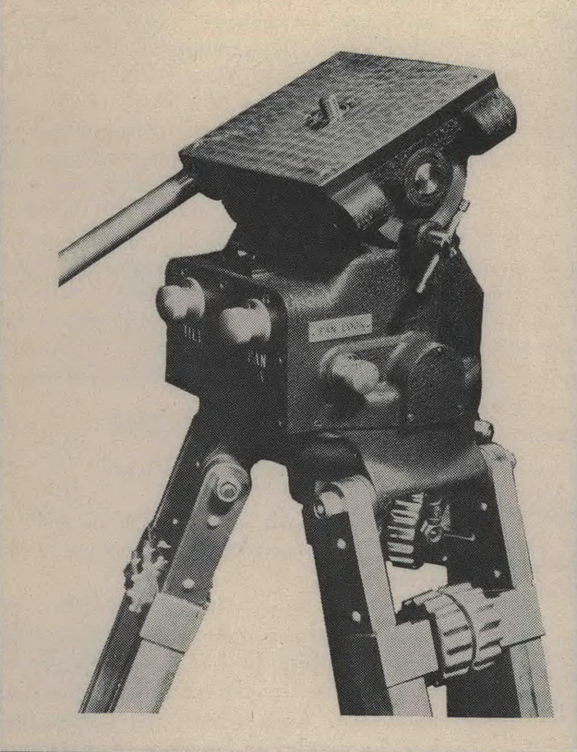
Auricon cameras are now available with a special shutter for use in making kinescope recordings in industrial and commercial television. Known as the "TV-T" or Television Transcription shutter, the development makes it possible to use Auricon cameras so modified to photograph television pictures from the face of a receiver tube. The pictures, which occur at a rate of 30 frames per second, are recorded on 16mm film at the rate of 24 fps without any loss of picture quality such as accurs when conventional motion picture cameras are used for this purpose.

Auricon cameras equipped with the "TV-T" shutter, according to Berndt-Bach, Inc., the manufacturer, may also be used to film conventional live action 16mm SOF pictures without any camera modification or change in the "TV-T" shutter.

The Auricon "1200" equipped with the "TV-T" shutter can make a kinescope record of a continuous 30 minute operation or program, using 1200 foot film magazines. The dual-purpose "TV-T" shutter is also available for the Auricon-Pro and Cine-Voice cameras.

Other important applications of Auricon "TV-T" kinescopes are delayed broadcasting, sponsor presentations, competition checks, pilot kinescopes, showcase films, film library, "hot kines," and TV air checks.

The company has available for free loan a 50-ft. kinescope "TV-T" demonstration film. For further details, write the company at 7377 Beverly Blvd., Los Angeles 36, Calif.



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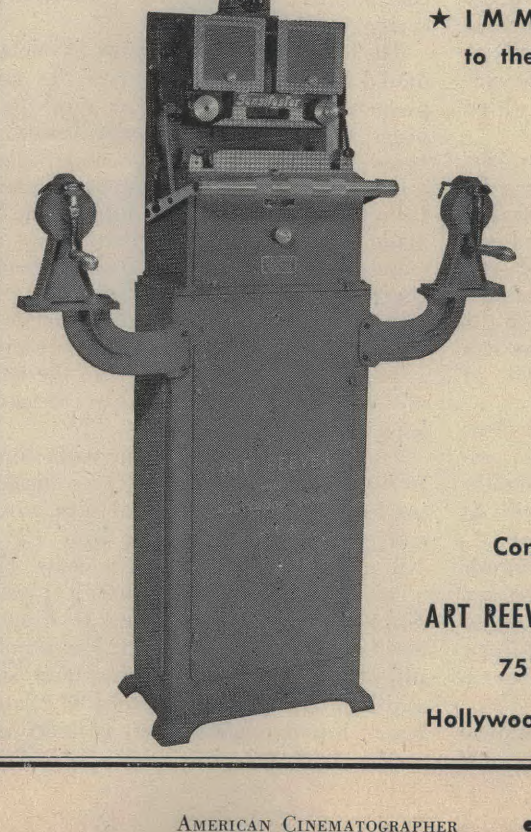
should enter from the lower left corner.

Pictorial continuity depends upon the proper build-up to the main point of the sequence. This simply means that if you have a striking closeup as the "punch line" of the sequence, don't haphazardly throw it into the film, but build up to it with carefully planned and executed long and medium shots.

The device known as *juxtaposition,* if correctly and not too frequently used, provides a smooth and original transition between scenes. Simply defined, the term means the matching up for effect of two separate scenes, each of which has different subject matter, but a similar compositional pattern. For example, if at the close of one scene we move into a spinning roulette wheel, and then dissolve to a spinning car wheel to introduce the next scene, an effective transition is made. Similarly, if we concentrate on the flame of a burning match and then dissolve to flames leaping in a fireplace, we have another forceful example of juxtaposition of compositional elements. This device can be used to add variety, to create smooth transitions, and to create a symbolic connection between two subjects of different meaning but similar form.

As stated before, camera movement is one of the most effective means of pre-



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serving pictorial continuity — its strongest point being that changes in composition can be made without the audience becoming confused as to the physical relationship of different parts of the setting or action.

The straight *tilt* or horizontal *pan* is used to follow the action of the moving object, while tripod remains stationary.

The *follow shot* (also known as *dolly shot, trucking shot,* or *perambulator shot*) is executed by mounting the camera on a movable base so that it actually follows along with the subject as it moves.

A *pull-in* is a shot in which the camera starts with a long or medium shot and gradually moves into a closeup of a particular segment of the scene. It is one effective means of establishing a new scene and then getting to the most important element quickly and smoothly.

The *pull-back* shot, a direct reverse of the above technique, starts with the camera in closeup, and then moves back to a medium or long shot to show the general surroundings. This is effective when it is necessary to impress a certain segment of the situation on the minds of the audience before the overall setting is shown.

Camera movement should never be used merely for the sake of movement, or for the purpose of forcing action into an otherwise static treatment. Like any other pictorial continuity device, it should always be used with a definite effect in mind.

Pictorial continuity should originate in the script. The director should be careful that the pattern follows through in the action as he stages it. The cameraman, above all, should use his camera to enhance the flow of one scene into the other, so that the audience will gain the impression of a freely moving story unhampered by jumpy transitions or gaps in the narrative.

Reprinted from "Cinema Workshop" by Charles Loring.

SIMPLE LENS FOR SPECIAL EFFECTS

(Continued From Page 36)

From these facts, it is easy to calculate any type of system you want. Suppose you use a +10D cylinder for your plus lens, and a −D cylinder for your minus lens. The plus cylinder will have a focal length of 100mm; the minus cylinder will have a focal length of 50mm. The magnification or distortion should equal the focal length of the difference in their focal lengths, that is, 100mm minus 50mm, which equals 50 mm. The magnification or distortions produced is equal to the focal length of the plus lens divided by that of the minus lens, in this case 100÷50, which equals 2.

Mounting a supplementary lens system like this involves accuracy, since the tube that holds the lens elements should keep them accurately aligned, and yet permit adjusting the separation between the two, and also permit one of the lenses to be rotated with respect to the other, so that the final adjustments can be made with the device in position on the camera.

The housing for this auxiliary lens system can be made from tubes of cardboard or metal. One should be slightly smaller in diameter so that it will fit fairly snugly within the larger tube — so that it may be moved in and out for focusing. In a mount like this, one can hold the spectacle-lenses in place either by using cardboard retaining-rings, which can be glued into place, or Scotch tape.

For long-shots, this system is complete in itself. But if you are going to use it making closer shots, you'll need to add a spherical auxiliary lens (*not* a cylinder lens as in the distorting system) in front of the plus cylinder to correct your focus. The focal length of this supplement should be equal to the distance between camera and subject: that is, if the subject is 6½ feet from the camera, use an auxiliary with a focal length of 2 meters — or a plus 0.50 D spectacle-lens — to refocus your optical system at 6½ feet.

The amount of distortion is determined by the overall power of the supplementary-lens system. For most purposes a set of these cylinder-distortion supplementaries ranging in magnifying power from 1.2 to 1.6 will prove satisfactory. More powerful units can be made easily enough, but they're not so convenient; if you use strong lenses, aberrations will be introduced which will be sharp, but the separation between them must be so large that you will have a long tube which will cut into the field of any but very long-focus camera-lenses .

Here are the specifications with which to build a set of three of these distorting-lens systems, which will give you a convenient range in power from 1.2 to 1.6, enough for most requirements. For a magnification of 1.2, use a plus 5 diopter lens and a minus 6 diopter lens, spaced 33.33mm apart. For a magnification of 1.5, use a plus 8 D lens and a minus 12 D lens, spaced 41.67mm. apart. For a magnification of 1.66, use a plus 9 diopter lens and a minus 15 diopter lens, spaced 43.34mm apart.

In this connection, the term "magnification" is used advisedly, for these cylinder-distortion systems produce the effect of distortion by magnifying the image in one plane or direction — either horizontal or vertical — and leaving the other vertically unchanged. The axis or direction of distortion is determined by the inclination of the axes of the two lens-cylinders of the distorting combination. If both axes are vertical, the image is distorted horizontally, and vice-versa. By revolving both units together, it should be possible to make the distortion change from horizontal to vertical during a scene, as when producing some very bizarre effects for nightmare or drunken scenes.

ZOOMAR LENS

(Continued From Page 27)

physical length of the lens as well as that of the coupled finder remains the same.

Built as an integral part of the lens assembly, the coupled finder is a wide-vision finder. It has no peephole to make "nose-to-the-camera" operation necessary. As a result, the cameraman has the maximum freedom of movement while filming, and the image he sees in the finder is just as it will appear later on the projection screen. It puts the cameraman in the unique position of being able to compose and edit his shooting on the spot, instead of later on the cutting and splicing board.

The operation of the new Zoomar 16 is smooth and continuous. The zoom mechanism does not rely on the operation of cams or gears which would be subject to wear. Adjusted carefully at the factory, it remains in perfect adjustment.

The technical data for the Zoomar 16 is as folows:

Aperture Range:	f/2.8 to f/16
Zoom Range:	1 in. to 3 in. (25mm to 75mm)
Distance Range:	8 ft. to Infinity (short-range adapters are available for shorter distances)
Weight:	1¼ pounds
Overall Dimensions:	5½ in. long 4½ in. wide 2 in. high

All optical elements are fluoride coated; also the highest resolving power ever built into any varifocal lens, according to the manufacturer, assures

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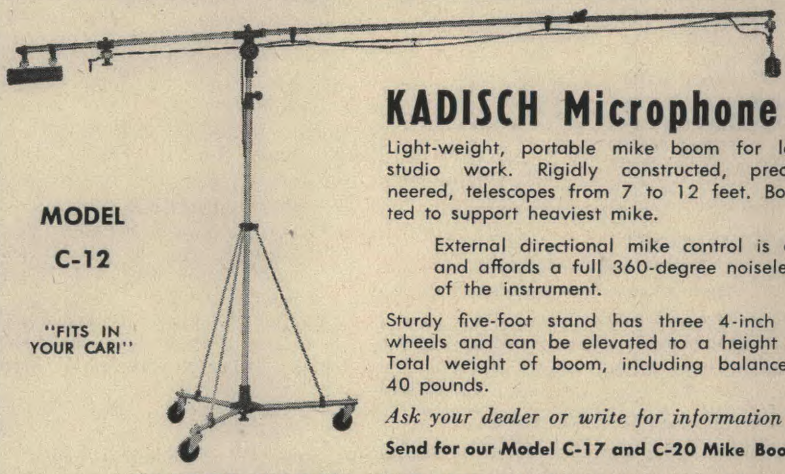
brilliance, detail, and picture contrast over the entire picture frame. Furthermore, there are no cemented elements so thermic stability is assured.

The new Zoomar 16 is the result of more than seven years of intensive research and development in the field of varifocal lenses, the manufacturer has stated. Into it has been built all the know-how and experience which company engineers gathered during the development of the earlier television and newsreel varifocal lenses. Thus, all the long sought-for advantages of a compact, versatile varifocal lens is now available for the 16mm cinematographer. The Zoomar 16 can be used with the following professional and amateur 16mm cameras: Arriflex, Auricon, Cine Kodak, Bell & Howell, Bolex, Keystone, Maurer, Mitchell, Morton, Pathe, and Revere. It may also be used with the Dage and RCA industrial television cameras.

You are able to see movies and TV as motion pictures because your "flicker fusion" frequency is slow. Such insects as bees, flies, and shore slaters see them as a rapid procession of stills, reports Philip R. Ruck, U.S. Public Health Service.



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Current Assignments of A.S.C. Members

Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

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ALLIED ARTISTS

● Ernest Miller, "The Forty-Niners," with Wild Bill Elliott, Virginia Grey. Thomas Carr, director.

COLUMBIA

● Henry Freulich, "The Miami Story," with Barry Sullivan. Fred F. Sears, director.

● Charles Lawton, "The Wood Hawk," (Technicolor) with Robert Francis, Donna Reed. Phil Karlson, director.

● Henry Freulich, "Jungle Man-Eaters," with Johnny Weismuller, Karin Booth. Lee Sholem, director.

● Lester White, "The White Stallion," with Phil Carey, Dorothy Patrick. Fred Sears, director.

● Burnett Guffey, "The Human Beast," with Glenn Ford and Gloria Grahame. Fritz Lang, director.

METRO-GOLDWYN-MAYER

● George Folsey, "A Bride for Seven Brothers," (CinemaScope, Eastman Color) with Jane Powell, Howard Keel. Stanley Donen, director.

● Robert Surtees, "Valley of the Kings," (Eastman Color, Wide-screen; shooting in Egypt) with Robert Taylor, Eleanor Parker. Robert Pirosh, director.

● Josephine Ruttenberg, "Brigadoon," with Gene Kelly, Van Johnson, Cyd Charisse. Vincentte Minnelli, director.

● Paul C. Vogel, "The Student Prince," (Ansco Color, CinemaScope) with Ann Blythe, Edmund Purdom. Richard Thorpe, director.

● Robert Planck, "The Prisoner of War Story," (Ansco Color, Wide-screen) with Ronald Reagan, Dewey Martin. Andrew Marton, director.

PARAMOUNT

● Loyal Griggs, "White Christmas," (Technicolor) with Bing Crosby. Michael Curtiz, director.

● Daniel Fapp, "Living It Up," (Technicolor, Wide-screen) with Dean Martin, Jerry Lewis. Norman Taurog, director.

● Robert Burks, "Rear Window," (Wide-screen, Technicolor) with James Stewart. Alfred Hitchcock, producer-director.

● Lionel Lindon, "Conquest of Space," (Color, Wide-screen) with Eric Fleming, William Redfield. Byron Haskin, director.

● Thomas Tutwiler, "The Bridges of Toko Ri," (Perlberg-Seaton Prod.; color) with Wm. Holden and Robert Strauss. Mark Robson, director.

REPUBLIC

● Harry Stradling, "Johnny Guitar," (Trucolor) with Joan Crawford, Sterling Hayden. Nick Ray, producer-director.

R.K.O.

● Harry Wild, "The Big Rainbow," (Technicolor) with Jane Russell. John Sturges, director.

● Nick Musuraca, "Susan Slept Here," with Dick Powell, Debbie Reynolds. Frank Tashlin, director.

20th CENTURY-FOX

● Milton Krasner, "Garden of Evil," (Technicolor, CinemaScope, shooting in Mexico) with Gary Cooper, Susan Hayward. Henry Hathaway, director.

● Lloyd Ahern, "Princess of the Nile," (Panoramic Prods.; Technicolor) with Debra Paget, Jeffrey Hunter. Harmon Jones, director.

● John Seitz, "The Kid from Outer Space," (Panoramic Prods.) with Charles Coburn, Spring Byington. Oscar Rudolph, director.

UNIVERSAL-INTERNATIONAL

● Cliff Stine, "Fireman Save My Child," (Wide-screen) with Hugh O'Brian, Buddy Hackett. Leslie Goodwins, director.

● Carl Guthrie, "Playgirl," with Shelley Winters, Colleen Miller. Joseph Pevney, director.

● Irving Glassberg, "The Black Shield of Falworth," (Technicolor, CinemaScope) with Tony Curtis and Janet Leigh. Rudolph Mate, director.

● Russell Metty, "Sign of The Pagan," (Technicolor, CinemaScope) with Jeff Chandler, Jack Palance. Douglas Sirk, director.

WARNER BROS.

● Wilfred Cline, "Lucky Me," (WarnerColor, CinemaScope) with Doris Day, Robert Cummings. Jack Donohue, director.

● Archie Stout, "The High and the Mighty," (Wayne-Fellows Prods.; WarnerColor, CinemaScope) with John Wayne, Claire Trevor. William A. Wellman, director.

● Edward Du Par, "Ring of Fear," (Wayne-Fellows Prods.; WarnerColor, CinemaScope) with Clyde Beatty, Micky Spillane. James Edward Grant, director.

● Peverell Marley, "The Talisman," (WarnerColor, CinemaScope) with Virginia Mayo, Rex Harrison. David Butler, director.

INDEPENDENT

● Stanley Cortez, "Broncho Apache," (Hecht-Lancaster Prods.; Technicolor, Wide-screen) with Burt Lancaster, Jean Peters. Robert Aldrich, director.

● Franz Planer, "The Long Wait," retitled "A Bullet Is Waiting," (Parklane Prods.; Wide-screen) with Anthony Quinn, Charles Coburn. Victor Saville, director.

● Ernest Laszlo, "Bronco Apache," (Hecht-Lancaster Prod.; Technicolor, Wide-screen) with Burt Lancaster, Jean Peters. Robert Aldrich, director.

● John Alton, "Desperate Men," (Benedict Bogeaus Prod., Eastman Color, ScenicScope) with John Payne, Lizabeth Scott. Allan Dwan, director.

TELEVISION

(The following directors of photography were active last month in photographing films for television, or were on contract to direct the photography of television films for the producers named.)

● Lucien Andriot, "The Life of Riley" series for Hal Roach Prods.

● Norbert Brodine, "Letters To Loretta" series for Lewislor Enterprises, Inc.

● Dan Clark, "Cisco Kid," and "I Led Three Lives," series for ZIV TV.

● Edward Colman, "Dragnet," Mark VII Prods.

● Robert DeGrasse, "Make Room For Daddy," D.P.I. and Marterto Prods., Inc.;

● George Diskant, "Four Star Playhouse," Four Star Prods.

● Karl Freund, "I Love Lucy" and "Our Miss Brooks," for Desilu Prods.

● Fred Gately, "Big Town," Gross-Krasne Productions.

● Russell Harlan, "Playhouse of Stars" for Meridian Productions.

● Jack MacKenzie, "The Hank McCune Show" for Video Pictures, Inc.

● William Mellor, "Adventures of Ozzie and Harriett," Stage 5 Productions.

● Virgil Miller, "You Bet Your Life," (the Groucho Marx Show), Filmcraft Productions.

● Hal Mohr, "The Joan Davis Show," Joan Davis Productions.

● Robert Pittack, "Cavalcade of America," Jack Chertok Productions.

● Mack Stengler, "Life With Elizabeth," Snader Telescription Corporation.

● Harold Stine, "Cavalcade of America," series for Jack Denove Prodns., Inc.

● Walter Strenge, "My Little Margie," Roland Reed Productions.

● Stuart Thompson, "Topper" series of ½-hr. telepix for Loveton-Schubert Prods.

● Gilbert Warrenton, "Chevron Theatre," Revue Productions.

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